CORPORATE RISK DISCLOSURE, UPPER MANAGEMENT CHARACTERISTICS, OWNERSHIP STRUCTURE AND FIRM VALUE: MALAYSIAN EVIDENCE

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DECLARATION

I, Mazurina Mohd Ali, declare that except where due acknowledgement has been made, the work completed is mine alone; the work has not been submitted previously, in whole or in part, to qualify for any other academic award; the content of the thesis is the results of work which has been carried out since the official date of the approved research program; any editorial work, paid or unpaid, carried out by a third party is acknowledged and relevant ethics procedures and guidelines have been followed.

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Mazurina Mohd Ali

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LIST OF ACRONYMS

ASB	:	Accounting Standard Board
BMLR	:	Bursa Malaysia Listing Requirements
CAC	:	Chair of Audit Committee
CEO	:	Chief Executive Officer
CFO	:	Chief Financial Officer
EPF	:	Employee Provident Fund
FRA	:	Financial Reporting Act
FRC	:	Financial Reporting Council
FRF	:	Financial Reporting Foundation
FRR	:	Financial Reporting Release
FRS	:	Financial Reporting Standard
GAS	:	German Accounting Standard
GFC	:	Global Financial Crisis
GLC	:	Government Linked Companies
IAS	:	International Accounting Standard
IASC	:	International Accounting Standard Committee
ICA	:	Industrial Coordination Act
ICAEW	:	Institute of Chartered Accountants in England and Wales
IFAC	:	International Federation of Accountants
IFRS	:	International Financial Reporting Standard
IRM	:	Institute of Risk Management
MAS	:	Malaysian Accounting Standard
MASB	:	Malaysian Accounting Standard Board
MBA	:	Master of Business Administration
MDA	:	Management, Discussion and Analysis
MICPA	:	Malaysian Institute of Certified Public Accountants
NEP	:	New Economic Policy
PNB	:	Permodalan Nasional Berhad
SEC	:	Securities Exchange Commissions

ABSTRACT

Risk disclosure by listed companies has received an upsurge of attention since the global financial crisis (GFC) of 2007-2009. The financial crisis, together with calls by professional bodies, has place pressure on company directors and securities regulators to bring about greater corporate risk disclosure. In practice, such corporate disclosures have been found deficient, and there is limited evidence on factors influencing risk disclosure decisions by management. Given this situation, the aim of this research study is to investigate the nature, extent and determinants of risk information disclosed, using the context of corporate reporting in Malaysia. Key management personnel and controlling shareholders are chosen as the two types of players expected to influence corporate risk disclosure decisions. In terms of key management personnel, this study draws on upper echelons theory to develop hypotheses about the effects of demographic and other background influences of the Chief Executive Officer (CEO) and Chair of Audit Committee (CAC) on corporate risk disclosure. In respect of ownership structure, aspects of agency theory are invoked to develop hypotheses about the effect of different categories of controlling shareholders on corporate risk disclosure decisions. Additionally, in order to establish the value-relevance of risk disclosures in annual reports, this study draws on the 'clean-surplus valuation model' to examine the association between the nature and extent of risk disclosures and the companies' share price.

Sampling from the 200 top listed companies on Bursa Malaysia's Main Board, data are hand-collected from annual reports for the year 2009. Content analysis is applied and risk disclosure in annual reports is coded and aggregated according to the number of sentences in which pre-determined risk-related keywords appeared. Risk disclosure sentences are classified according to four sub-categories: operational risk, environmental risk, financial risk and strategic risk. Demographic data for CEOs and CACs is collected, including age, functional track, education, tenure and ethnicity. Ownership structure is categorised by size of shareholding of family owners, government owners and foreign owners. A share price for the year ended 2009 is used to measure the company's market value.

The study finds, in aggregate, financial risk and operational risk disclosures are the highest type of risk disclosure in annual reports. These two types of risks dominate over the other two types of risk disclosures – strategic and environmental risks. These results suggest that there is not a comprehensive scope of risk-related information disclosed by companies in their annual reports. Despite the fact that all categories of risk disclosures could have relevance to investors and other stakeholders, the textual content in annual reports is found to be relatively limited or vague, particularly in risk categories that are not covered by prescriptive regulations.

Generally, the findings of this study show evidence of little influence of the observable demographic characteristics of key management players on corporate risk disclosure in Malaysia. Nonetheless, focusing on total risk disclosure, the CEOs' functional track, tenure and ethnicity are found to significantly relate to corporate risk disclosure. CEOs with Bumiputera ethnicity, with shorter-tenured and with output functional backgrounds are associated with higher corporate risk disclosure. The inference is that ethnicity which is highly correlated with Islamic beliefs and is characterised by deeply-held

values of transparency towards others, together with a shorter-tenure and an output functional background during which the CEO remains open to a culture of transparency, will positively affect risk disclosure decisions. However, in contrast, the background of CACs is found to have no significant influence. This result suggests that the CAC's observable demographic characteristics, which can include professional accounting qualifications, do not carry enough influence to affect decisions on corporate risk disclosure. Turning to the influence of shareholders, government ownership is found to be significantly and positively related to risk disclosure, but family ownership and foreign ownership are found to have an insignificant association with the level of risk disclosure. These findings suggest that government controlling shareholders generate an incentive for directors to encourage corporate transparency because of their high monitoring power. An alternative interpretation is a willingness by management to supply greater proprietary information about corporate risk because of a restricted market for ownership control of government-owned enterprises in Malaysia.

Despite the conventional arguments that greater disclosure increases stock price of company, this study finds no significant relationship between total risk disclosure, regulated risk disclosure and non-regulated risk disclosure and company's share price. Interestingly, this study finds a significantly positive relationship between share price and the interaction term for corporate risk disclosure and family-controlled firms. This implies that firms with a higher proportion of family members on the board that disclose higher risk information are treated as having more value-relevance by investors. By comparison, the interaction term for government-controlled firms and corporate risk disclosure is not significantly associated with share price. This implies that firms with greater risk disclosure do not influence the company's share price on the grounds that they are a government controller. This study further finds a negative significant association with share price of the interaction of foreign-controlled firms and corporate risk disclosure. The inference is that foreign-controlled company that disclose higher risk information are viewed by investors as being more willing to provide 'bad news' information, that would cause the market to revise their share value downwards.

This study makes a contribution to extant literature on risk disclosure and has practical implications for corporate regulators. First, the literature on approaches to designing a classification typology for corporate risk is unsettled. This study develops a typology and associated definitions that can minimize the ambiguity and maximize the objectivity of measuring the nature and extent of corporate risk disclosure. Second, in terms of key management players and the controlling shareholders, prior literature has not provide evidence on the influence of the CEO or CAC on risk disclosure, and the prior evidence on shareholder influence has been limited and mixed. This study provides new evidence on manager-specific effects in respect of the CEO and CAC. It also provides additional evidence on the effects of family, government and foreign shareholders on risk disclosure. A further feature of the contribution of this study is the evidence that there is no value relevance for total risk disclosure as well as each category of risk disclosure to the Malaysian share market. The inference is that securities regulators need to consider ways of strengthening risk disclosure practices, otherwise the current requirements will remain a costly compliance exercise for Malaysian companies without providing significant offsetting benefits to shareholders from reduced information asymmetry.

CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

Calls for corporate reporting in relation to risk management and uncertainties have increased since the global financial crisis (GFC) of 2007-2009. Recently, the Institute of Chartered Accountants in England and Wales (ICAEW) in the United Kingdom (UK) made a call to company boards to bring about greater risk disclosure regarding financial and operational risks in their corporate reports[1]. Similarly, the UK's Financial Reporting Council (FRC) recommended that companies increase their key strategic risk information[2]. In a press release in 2011 titled '*corporate reports must prioritise major risk*', the FRC casts a clear leadership role for top management as well as audit committees in prioritizing risk management tasks and ensuring the disclosure of these risk priorities to investors, rather than reporting 'indiscriminate lists of risks that all companies face'[3]. Prior to the GFC, there were corporate governance reforms[4] of the early 2000's triggered by the large-scale Enron *et al.* collapses and financial scandals. These reforms included new regulations, stock exchange guidelines and international financial reporting standards concerning corporate risk management and disclosures.

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[1] *The Accountant,* July 24, 2012, 'ICAEW calls for greater risk disclosure'. Retrieved from http://www.theaccountant-online.com/news/icaew-calls-for-greater-risk-disclosure/ on November 19, 2012.

[2] *The Accountant,* September 1, 2011, 'FRC proposes to increase reporting on strategic risks'. Retrieved from http://www.theaccountant-online.com/news/frc-proposes-to-increase-reporting-on-strategic-risks/ on November 19, 2012.

[3] *Accountancy Age*, September 1, 2011, 'FRC: corporate reports must prioritise major risk'. Retrieved from http://www.accountancyage.com/aa/news/2105825/frc-corporate-reports-prioritise-major-risk/ on November 19, 2012.

[4] See e.g. Cadbury Report 1992, Greenbury Report 1995, Malaysian Code on Corporate Governance 2000, Singapore Code of Corporate Governance 2001, Thailand Code for Best Practice for Directors of Listed Companies 2002, Sarbanes-Oxley Act 2002, NYSE Corporate Governance Rules 2003, Bangladesh Code of Corporate Governance 2004, Hong Kong Corporate Governance Code 2004 at http://www.micg.net/code.htm

Financial risk, especially relating to financial instruments, was the area of greatest increase in corporate risk disclosure requirements arising in the mid 2000's.

In the United States (US), the Securities Exchange Commission (SEC) issued *Financial Reporting Release* No.48 (FRR48) in 1997, which requires SEC registrants to disclose their financial condition as well as quantitative and qualitative disclosures about market risks in the Management, Discussion and Analysis (MDA) section. In Germany, *German Accounting Standard No.5* (GAS5) requires companies to present risk information in a separate section of the management report as well as in the consolidated financial statement. Similar initiatives have been undertaken by other countries as shown in previous studies such as France (Combes-Thuelin *et al.,* 2006), European Union (Abraham and Cox, 2007) and Portugal (Oliveira *et al.,* 2011). In fact, in the UK, the most notable risk disclosure framework issued by the ICAEW entitled *'Financial Reporting of Risk – Proposals for a Statement of Business Risk'* has been published in the year 1997. The ICAEW proposed and stressed that directors provide and enhance risk information in the annual reports to facilitate informed decision making by investors and restore investors confidence (Linsley and Shrives, 2006; Cabedo and Tirado, 2004; Solomon *et al.,* 2000). These reporting regulations and frameworks, to some extent, could develop good corporate governance practice through the lens of the growing importance of risk information (Amran *et al*., 2009).

The extent to which companies provide transparency about the management of their various types of risk is a central issue in good corporate governance and risk management practices. The emergence of a sound risk management practice by companies is important since investors want to assess a company's future cash flows and financial condition. Furthermore, investors want disclosures about uncertainties i.e., within company and in the industry that could underlie their assessment about the company. In essence, managers' should expand their knowledge and experience in risk management practices in which this can be reflected through disclosures of risk information. Therefore, companies need to maintain a sound system of internal control[5]

[5] Internal control, risk management and risk reporting have been embedded in corporate governance. The awareness was in the the form of improved guidance on developing and implementing internal control system internationally as evidenced by, for example, the Sarbanes-Oxley Act of 2002 in the US and Turnbull Report (1999) in the UK.

and risk management procedures in which the disclosure of risk information should be prioritised and emphasized. Research into the factors that drive risk disclosure decisions by managers can provide a way forward to help better explain and understand how to enhance the corporate practice of risk reporting. Recent empirical evidence (e.g., Amran *et al*., 2009; Abraham and Cox, 2007, Linsley and Shrives, 2006; Lajili and Zegal, 2005) reveals that risk information presented in companies' annual reports is limited and deficient. Prior literature also suggests that corporate annual reports require sufficient appropriate risk information so that investors can assess a company's risk profile and make informed and rational decisions about the allocation of their capital (e.g., Healy and Palepu, 2001; Solomon *et al.*, 2000; Linsley and Shrives, 2000). These research findings together with calls by professional bodies, has highlight the urgency for the corporate and securities regulators to increase corporate risk disclosure requirements. It can also influence management and controlling shareholders to increase the extent of voluntary disclosure of corporate risk information. More broadly, the dynamic nature of the business environment nowadays has increased public demand for greater disclosure by firms relating to risks and uncertainties (Linsley and Shrives, 2005).

1.2 RESEARCH JUSTIFICATION AND OBJECTIVE

Previous studies focusing on risk reporting have sought to quantify the extent of disclosure in financial statements for specific categories of risks such as market risk and credit risk (e.g., Rajgopal, 1999; Linsmeier *et al*., 2002). Others have examined more comprehensive risk information in annual reports, taking into accounts a broader range of risk such as financial risk and operational risk (e.g., Lajili and Zhegal, 2005; Linsley and Shrives, 2005, 2006; Abraham and Cox, 2007). The extent of risk reporting has also been studied in companies' interim reports (e.g., Elzahar and Hussainey, 2012) and prospectuses (e.g., Deumes, 2008). Until lately, most of these comprehensive risk disclosure studies have been undertaken in Western settings where the ownership structure is relatively diffused. Examples are Solomon *et al.* (2000), Linsley and Shrives (2006) and Abraham and Cox (2007) in the UK, Beretta and Bozzolan (2004) in Italy and Oliveira *et al.* (2011) in Portugal. Corporate risk reporting practices have not been

studied as extensively in developing economies where ownership structure is more concentrated.

Even though there are studies of risk disclosures in emerging capital markets such as United Arab Emirates (UAE) (Hassan *et al.*, 2011; Hassan, 2009) as well as Malaysia (Arshad *et al.*, 2012; Amran *et al*., 2009), these empirical studies which investigate risk information under the broader perspective are still limited. For example, Hasan *et al.* (2011) and Amran *et al.* (2009) examine risk disclosure in non-financial UAE and Malaysian companies, respectively, by exploring only company-specific variables, without exploring other possible determinants of risk disclosure. Non-financial companies are samples that exclude companies in banking, finance and insurance industries. Arshad *et al.* (2012) examine risk disclosure in non-financial Malaysian companies, and apart from family and government ownership structures, other ownership structures are not tested. Furthermore, as far as this study is concerned, studies on upper echelon's cognitive characteristics have not been done using Malaysian background.

The objectives of this study are four-fold. First, to present a picture of the extent of risk information disclosed in annual report and to establish the diversity of risk disclosure of Malaysian listed companies for the year under study (i.e. 2009). This purpose is to provide a snapshot of the volume and types of risk information disclosed in annual reports. Although there have been published studies on risk disclosures in Malaysia, there has not been comprehensive evidence on the extent of risk disclosures in response to the pressure from increasing demand for risk information due to the global financial crisis. It is thus instructional to identify how corporations in an emerging capital market (i.e. Malaysia) practice risk reporting. The literature on voluntary disclosures shows that companies are willing to disclose their voluntary information in response to a number of factors. Some of the reasons may be attributed to benefits outweighing the costs of disclosing the voluntary information. Examples of benefits and costs are developing corporate image, increasing legislation or because of specific events (Haniffa and Cooke, 2002). Based on signalling and proprietary cost theories, it is expected that companies' risk reporting should reflect the developments in corporate governance and regulations made over the past years. The global financial crisis has provided an impetus for increasing corporate risk management and disclosure.

Second, this study determines whether upper echelons' cognitive characteristics underlying observable demographic characteristics such as age, functional track, education, tenure and ethnicity of key management players have an influence on corporate risk disclosure. The purpose is to determine whether differences in the background characteristics of upper management influence the extent and variety of disclosure of risk information by Malaysian companies in terms of the management's cost-benefit decisions.

Third, the study will look at the impact of ownership structures on the corporate risk disclosure practices in Malaysia. The association between corporate disclosure and ownership structures has long been of interest to accounting researchers (e.g., Liu and Sun, 2010; Eng and Mak, 2003; Haniffa and Cooke, 2002; Hossain *et al.*, 1994). This is because of the separation of ownership and control of a corporation which raises the issue of information asymmetry. Disclosure is seen as one of the mechanisms to mitigate adverse selection by reducing information asymmetry between owners and managers. However, the extents to which different ownership structures could increase or reduce information asymmetry problems still remains unclear. In addition, some of the ownership structures and corporate disclosures relationships are weak and not verified in the literature. Moreover, evidence of the ownership structure and corporate disclosure relationships is limited. The only Malaysian evidence is found in a conference paper by Arshad *et al.*, 2012 in relation to family ownership. The findings of previous research do provide a good starting point to further examine the relationship between risk disclosure and a firm's concentrated ownership structures. This study thus relates the level of risk disclosure to three types of ownership concentration, namely, family ownership, government ownership and foreign ownership. These are the most commonly found ownership structures in Malaysia.

Fourth, this study determines the impact of risk disclosure in the share market (i.e. its value-relevance) in Malaysia. The question whether greater disclosure level increases firm value is a matter of considerable interest and importance to investors and securities regulators. However, theoretical argument suggests that greater disclosure is associated with an increase in firm value. Information disclosure is important to investors. Through sufficient information, investors can properly monitor and judge the opportunities and the risks of their investment opportunities. Moreover, the more they know, the more

accurately they will be able to determine a company's value. Therefore, disclosing more information is expected to grant investors with more relevant signals about the company and therefore investors are more able to accurately determine the company's value. However, empirical evidence does not consistently support such signalling theory and produces mixed findings. On the one hand, it is argued that risk disclosure can only serve as a mechanism to increase the company's value if investors perceive that the information is credible and relevant. On the other hand, it could be argued that a company with a higher level of risk may demonstrate a reluctance to reveal such information in order to divert attention from their riskiness. Whereas risk disclosure is increasingly required in annual reports, the current regulations only focusing on a specific type of risk information (i.e. financial risk) and allow firms a degree of discretion with regard to the other types of risk information to be disclosed. Hence risk disclosures depend on a manager's willingness to actively disclose the right information (Deumes, 2008). Indeed, the decisions of the management whether to increase transparency or reduce competitiveness will make risk disclosures contain 'boilerplate' disclosure elements that do not help investors to make accurate decisions. Existing literature (e.g., Ismail *et al.*, 2012) suggests that there is still demand for empirical work to examine the impact of risk disclosures on the company's value. Thus, based on mixed findings from prior research, this study will determine the relationship between risk disclosures which include regulated and non-regulated risk disclosures and firms' market value.

Figure 1.1 and Table 1.1 shows the conceptual framework and theoretical perspectives, empirical objectives and research questions of the study.

Figure 1.1:

Conceptual Framework of Study

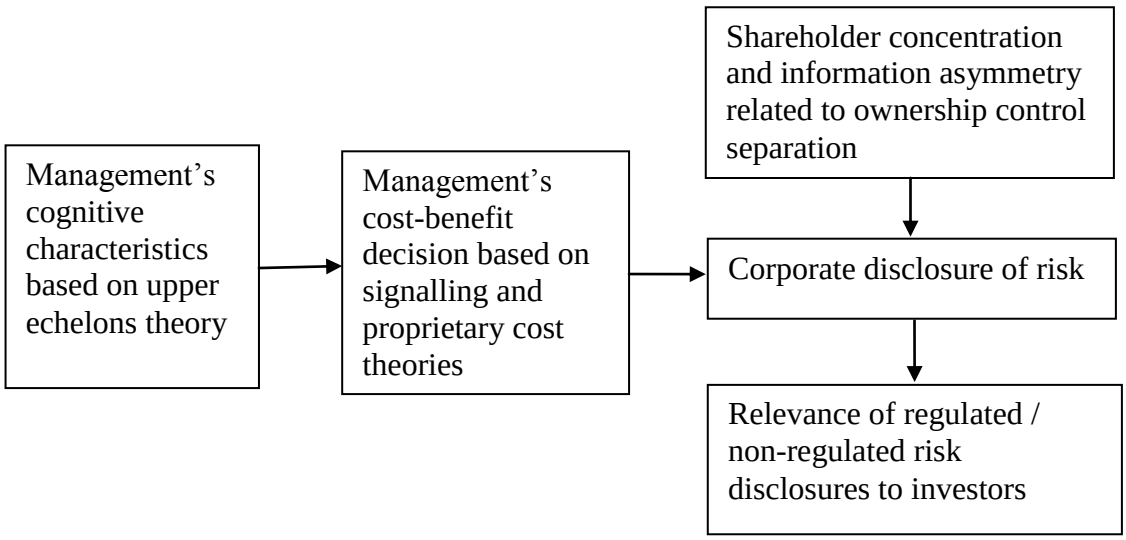


Figure 1.1 depicts the conceptualisation of relationships to be investigated in this thesis. It views the inherent cognitions of the key management players in the organization (based on upper echelons theory) as antecedent to the management decisions about disclosure of corporate risk (based on signalling and proprietary costs theories). It also includes the influence of shareholders on corporate risk disclosure in terms of the extent of access of larger shareholders to inside information (information asymmetry perspectives). Finally, the relevance of corporate risk disclosure to investors is considered. Hence, the framework addresses not only the influence of key managers and owners on the extent of corporate risk disclosure but also on whether that disclosure has usefulness in the share market.

Table 1.1:

Summary of the Study's Invoked Theories, Empirical Objectives and Research Questions

	Theoretical Perspective	Empirical Objectives	Research Questions
1.	Signalling, Proprietary cost	To identify the extent of corporate risk disclosure in various categories.	What is the nature, extent and industry difference of risk reported in aggregate and under categories of operational risk, environmental risk, financial risk and strategic risk in annual reports of large listed companies in Malaysia?
2.	Upper echelons	To determine the effects of upper echelons factors on corporate risk disclosure.	Do manager-specific factors of top management (i.e. age, functional track, education, tenure and ethnicity) influence the nature and extent of corporate risk disclosure?
3.	Agency	To determine the effects of ownership structure on corporate risk disclosure.	Does shareholder concentration in terms of family ownership, government ownership and foreign ownership have an influence on the nature and extent of corporate risk disclosure?
4.	Signalling	To determine the impact of corporate risk information in the share market (i.e. its value-relevance).	Does the extent of total, regulated and unregulated risk disclosure have value relevance in the Malaysian share market?

1.3 RESEARCH MOTIVATION AND CONTRIBUTION

The comprehensive, systematic and reliable disclosures of corporate risk through formal channel of annual reports could be a key benefit to shareholders, lenders, suppliers, employees and other stakeholders. But such disclosure, other than financial risks mandated under accounting standards, has been deficient. To achieve improved risk disclosures, an understanding is sought in this study of the influence of two types of

corporate players expected to influence corporate risk disclosure decisions, namely, top level management and controlling shareholders. To this end, this study provides new evidence on the extent to which the Chief Executive Officer (CEO) and Chair of Audit Committee (CAC), as well as family, government and foreign controlling shareholders have an effect on the nature and extent of corporate risk disclosure. The perspectives of signalling theory, proprietary cost theory, upper echelons theory and agency shareholder-manager separation theory are invoked to provide an improved framework for investigating the factors affecting corporate risk disclosure. Additionally, the prior approaches to designing a classification typology for corporate risk are reviewed and a revised classification scheme and set of definitions is developed. The aim is to develop a typology and associated definitions that can minimize the ambiguity and maximize the objectivity of measuring the nature and extent of corporate risk disclosure. The findings can then potentially have use in predicting which companies are more or less conducive to initiatives or pressures that encourage greater risk disclosures.

As an extension, this study undertakes the modelling of, and provides evidence on, the value-relevance of such risk disclosures in the share market in Malaysia, in terms of whether such information significantly affects share prices. This can give an indicator of whether corporate risk disclosure practices in 2009, at a time of high financial volatility in the share market and economic uncertainty for companies, were viewed by investors as having information benefits that outweighed the cost to the company of providing the information. If corporate risk disclosures are found to lack value-relevance, then securities regulators would need to consider ways of strengthening risk disclosure practices. Otherwise the current requirements would remain a costly compliance exercise for Malaysian companies without significant offsetting benefits to shareholders from reduced information asymmetry.

This study contributes to the literature on the association between upper echelons characteristics, ownership structures, firm value and corporate risk disclosure in several ways:

1. It responds to the Bamber *et al.'s* (2010, p. 1134) suggestion that '...exploring the roles individual managers play in other financial reporting choices is a fruitful avenue for future research.' Bamber *et al.* (2010) especially find that the

magnitude of managers' influence varies extensively and significantly in firms' voluntary disclosure decision making. This influence of top managements' personal characteristics on decision-making by firms offers an interesting perspective in explaining cross sectional differences in corporate disclosure (Bamber *et al*., 2010). Bamber *et al.* (2010) show that these personal characteristics of managers play an important role in firm earnings guidance characteristics; Dyreng *et al*. (2010) examine these personal characteristics with respect to tax avoidance behaviour and find that such characteristics cannot explain manager fixed effects; Ge *et al*. (2009) examine Chief Financial Officers' (CFO) characteristics and their effects across the firm's financial reporting choices. Taking these approaches into account, this study will contribute to the embryonic manager-effects literature in regards of risk disclosure decisions by top management.

2. In spite of increasing regulations (created by accounting standards and Bursa Malaysia listing requirements) that require companies to disclose information, the current rules are not comprehensive (Lazar and Choo, 2008) especially in relation to risk disclosure. They depend largely on managers' willingness to actively disclose the right information. Top management may choose to disclose company information exceeding the level mandated by regulation or in advance of compliance date (i.e., voluntarily). Therefore, upper echelons theory is invoked to address the factors of the top management background that would influence their willingness to disclose risk information. In relation to this study, the focus is on the role of observable demographic characteristics of top managers' background since upper echelons theory proposes that 'an emphasis on background characteristics, rather than psychological dimensions, seems essential' (Hambrick and Mason, 1984, p. 196).

3. In response to Finkelstein and Hambrick's (1990) call for research on the influence of executives beyond the Chief Executive Officer (CEO) level, the study will add the Chair of Audit Committee (CAC) to exhibit distinct risk disclosure influences. In particular, the CEO is chosen since he/she is the foremost executive ranked position in the corporation that might influence the overall decisions within the organisation. On the other hand, the CAC is chosen because normally

that position oversees the financial reporting, auditing, internal control and risk management processes of the firm. In addition, the CAC is also included since he/she holds responsibility for the effective functioning of the audit committee. Audit committee plays a significant monitoring role in assuring the quality of financial reporting and corporate accountability (Carcello and Neal, 2000). Given corporate risk disclosure is part of risk management and internal control, it is appropriate to study the influence of the CAC together with the CEO in relation to risk information disclosure by companies.

4. Additionally, Malaysia is a multiethnic society with Chinese and Malays dominating its economics and politics. Therefore, the socio-economic background of top management in Malaysian corporations would be an interesting issue to be addressed. While prior studies on ethnicity focus largely on political cost and legitimacy theories (e.g., Haniffa and Cooke, 2002; 2005), this study will bring a different theoretical perspective under the umbrella of upper echelons theory. As the directors of Malaysian corporations come from different ethnic backgrounds, examination of their influence over the disclosure of risk information will impart a new direction on the sociological aspects of corporate disclosure research.

5. Generally, there are a number of empirical studies that discuss the role of the ownership structure in corporate disclosure (e.g., Liu and Sun, 2010; Eng and Mak, 2003; Haniffa and Cooke, 2002) and precisely in corporate risk disclosure (e.g., Arshad *et al.*, 2012). On the whole, empirical results show inconclusive evidence due to limitation of ownership concentration that ignores the issues of shareholders' identities (Chu and Cheah, 2006). This study extends the existing literature by including different types of ownership structure and its impact on corporate risk disclosure focusing on the Malaysian business environment where concentrated ownership structure is prevalent. For example, the conflicting theoretical viewpoints as regards the relationship between family ownership and agency costs have been specified in previous studies. The arguments are whether the family ownership firms create or reduce agency costs. The current evidence of family ownership in Arshad *et al* (2012) in relation to corporate risk disclosure quality and quantity is insignificant. Hence, this study attempts to provide evidence on the effect of family ownership on corporate risk disclosure.

6. It adds to recent literature showing the links to corporate risk disclosure of government ownership and foreign ownership in a different institutional setting specifically from a developing country such as Malaysia. Despite studies concerning government ownership being common in Asia, the results are inconclusive since there are conflicting arguments with regards to agency costs. A number of prior studies have shown positive relationships between foreign ownership and corporate voluntary disclosure. Nevertheless, there is very limited research on the relationship between foreign ownership structure and corporate risk disclosure. Therefore, with the inclusion of government and foreign ownership structures, this study fills a gap in the literature.

7. Recent literature examines risk disclosures in specific areas (Beretta and Bozzolan, 2004). It only focuses on a narrow set of risks, essentially market risk and credit risk as well as those associated with the use of financial instruments. In Malaysia, a study on this matter has been done among Malaysian listed firms to examine the compliance with FRS132 *Financial Instruments – Disclosure and Presentation* (Othman and Ameer, 2009). Other prior studies on corporate risk disclosure with empirical evidence on the factors affecting the extent of disclosure (e.g. Linsley and Shrives, 2006) and empirical literature that examines risk under its comprehensive perspectives remains limited. Therefore, this study extends prior studies by examining a broad perspective to corporate risk disclosure in the Malaysian context. The study is useful in assisting both regulators and investors in (i) identifying the broad nature and extent of risk information disclosed; and (ii) raising awareness in presenting risk disclosure by companies in Malaysia.

8. Moreover, the impact of disclosing accounting numbers on stock returns is well documented in the literature (Ohlson, 1995), but the impact of disclosing a certain category of information, such as risk information, is yet to be adequately explored. In this regard, prior studies however, focus either (to name a few) on investigating the association between voluntary disclosure levels and a proxy of the cost of equity capital (e.g., Botosan and Plumlee, 2002), equity offerings (e.g., Lang and Lundholm, 2000) or a stock market liquidity (e.g., Healy *et al.,* 1999). However, there is insufficient empirical evidence with regard to the direct

relationship between corporate risk disclosure and firm value in general and for emerging markets in particular. For this reason, this study tests the impact of both regulated and non-regulated corporate risk disclosure on the firms' market value.

1.4 MALAYSIAN BUSINESS ENVIRONMENT

The East Asian financial crisis in 1997/1998 as well as massive business losses around the globe ten years later exposed weak governance which in turn weakened investors' confidence in the global capital market including Malaysia (Nam and Nam, 2004). The problem affecting corporate governance turned out to hit listed companies heavily because of the certain features of the corporate sector in Malaysia. These features are an economy that is generally characterised with a high level of ownership concentration, excessive government intervention, significant participation of owners in management, and a weak legal systems and enforcement (La Porta *et al*., 1999; Chu and Cheah, 2006).

Compared to widely held business corporations in developed countries such as the UK and the US, Malaysian corporations exhibit a different pattern of ownership in which there is more concentrated ownership by families and significant equity holdings by government (Abdullah, 2006). The government intervention in the form of the New Economic Policy (NEP) in 1970, which was due to the ethnic rioting in 1969 was intended to eliminate the race identification with economic functions (Tam and Tan, 2007; Haniffa and Cooke, 2005). The NEP was introduced by the government to completely rectify the imbalance between Chinese and indigenous Malays in the economy. The economy nevertheless, still retained Chinese family-owned and run businesses to the exclusion of Malays (Gul, 2006). The implementation of NEP was intended to be a form of institutionalised positive discrimination towards Bumiputera[6] that could affect corporate behaviour in the Malaysian business environment (Haniffa and Cooke, 2005). To effectively implement the NEP, the government passed the Industrial Coordination Act (ICA) in 1975. As against economic domination by Chinese ethnics, the NEP was committed to achieve 30 percent Bumiputera ownership share of

[6] Bumiputera refers to Malaysian for Malays and other indigenous ethnic groups (Haniffa and Cooke 2005, p.398).

the corporate sector by 1990. Since then, the Bumiputera have been given priority and various concessions including business contracts, access to capital and other subsidies (Johnson and Mitton, 2003). Since the ownership structure in Malaysia is substantially a result of the national economic agenda (Gomez and Jomo, 1999), the Malaysian market may provide a unique setting for the implementation of corporate disclosure compared to other countries within the Asian region.

As a fact, Malaysian development of company law and practice is closely connected to the development of the UK's company legislation. This rigid and dominated development in Malaysia reflects the country as a former British colony. Moreover, the Malaysian accounting and auditing standards replicate standards in the UK and other commonwealth countries such as Australia and New Zealand (Gul, 2006). In spite of having broad similarities in favours to accounting and regulatory environments with the UK, however, there is different institutional environment as characterised among Malaysian firms (Gul, 2006). Furthermore, Malaysian business environment is characterised by the existence of politically favoured corporations (Gul, 2006).

As shown in Table 1.2, although Bumiputera ownership has grown greatly from 2.4 percent in 1970 to 18.7 percent in 2002, the ownership still totally fell short of the initial target of 30 percent. By comparison, Chinese equity ownership has increased to more than double that of the Bumiputera. As evidenced by Jomo (1995), Tam and Tan (2007) state that the Malaysian market is dominated by large government trust funds such as the Permodalan Nasional Berhad (PNB) and the Employees Provident Fund (EPF). Before 1990, foreign ownership has decreased tremendously and only started to increase in the early 1990s after the introduction of the ICA in 1975 which has liberalised capital flows (Suto, 2001) to favour not only non-Bumiputera but also foreign business communities (Tam and Tan, 2007). In relation to this study, the environment of ownership structure in Malaysia which mainly concentrating on family, government and foreign shareholding could influence the nature and extent of risk disclosure by companies. The impact of the shift in corporate ownership brought about by Malaysia's 'new economic policy' reforms has been of continuing interest to government policy-makers. One area of impact of relevance to corporate governance and securities market policy-makers is the impact on voluntary corporate risk disclosure. With this area of policy-making interest in mind, this study develops and tests a hypothesis about the

Table 1.2:
Ownership of Share Capital (at par value)[a] of Limited Companies, 1969, 1970[b], 1975, 1980[c], 1983, 1985, 1990, 1995, 1999 and 2002

Ownership group	1969	1970 [b]	1975	1980 [c]	1983	1985	1990	1995	1999	2002
Malaysian residents	**1,767.7 / 37.9**	**1,952.1 / 36.7**	**7,047.2 / 46.7**	**18,493.4 / 57.1**	**33,010.5 / 66.4**	**57,666.6 / 74.0**	**80,851.9 / 74.6**	**129,999.5 / 72.3**	**208,797.2 / 67.3**	**278,094.0 / 71.1**
Bumiputeras	**70.6 / 01.5**	**125.6 / 02.4**	**1,394.0 / 09.2**	**4,050.5 / 12.5**	**9,274.6 / 18.7**	**14,883.4 / 19.1**	**20,877.5 / 19.3**	**36,981.2 / 20.6**	**59,394.4 / 19.1**	**73,161.8 / 18.7**
• Individuals [d]	49.3 / 01.0	84.4 / 01.6	549.8 / 03.6	1,880.1 / 05.8	3,762.2 / 07.6	9,103.4 / 11.7	15,322.0 / 14.2	33,353.2 / 18.6	54,046.0 / 17.4	66,746.0 / 17.1
• Trust agencies [e]	21.3 / 00.5	41.2 / 00.8	844.2 / 05.6	2,170.4 / 06.7	5,512.4 / 11.1	5,780.0 / 07.4	5,555.5 / 05.1	3,628.0 / 02.0	5,348.4 / 01.7	6,415.8 / 01.6
Other Malaysian residents	**1,697.1 / 36.4**	**1,826.5 / 34.3**	**5,653.2 / 37.5**	**14,442.9 / 44.6**	**23,735.9 / 47.7**	**42,783.2 / 54.9**	**59,974.4 / 55.3**	**93,018.3 / 51.7**	**149,402.8 / 48.2**	**204,932.2 / 52.4**
• Chinese	1,064.8 / 22.8	1,450.5 / 27.2	— / —	— / —	— / —	26,033.3 / 33.4	49,296.5 / 45.5	73,552.7 / 40.9	117,372.4 / 37.9	159,806.9 / 40.9
• Indians	41.0 / 00.9	55.9 / 01.1	— / —	— / —	— / —	927.9 / 01.2	1,068.0 / 01.0	2,723.1 / 01.5	4,752.9 / 01.5	5,951.1 / 01.5
• Others	— / —	— / —	— / —	— / —	— / —	987.2 / 01.3	389.5 / 00.3	1,751.1 / 01.0	2,888.0 / 00.9	3,204.7 / 00.8
• Nominee companies	98.9 / 02.1	320.1 / 06.0	— / —	— / —	— / —	5,585.1 / 07.2	9,220.4 / 08.5	14,991.4 / 08.3	24,389.5 / 07.9	35,969.5 / 09.2
• Locally controlled companies [f]	471.0 / 10.1	— / —	— / —	— / —	— / —	9,249.7 / 11.8	— / —	— / —	— / —	— / —
• Federal and state governments	21.4 / 00.5	— / —	— / —	— / —	— / —	— / —	— / —	— / —	— / —	— / —
Foreign residents	**2,909.8 / 62.1**	**3,377.1 / 63.4**	**8,037.2 / 53.3**	**13,927.0 / 42.9**	**16,697.6 / 33.6**	**20,297.8 / 26.0**	**27,525.5 / 25.4**	**49,792.7 / 27.7**	**101,279.2 / 32.7**	**112,727.6 / 28.9**
Share in Malaysian companies	1,235.9 / 26.4	— / —	4,722.8 / 31.3	7,791.2 / 24.0	9,054.3 / 18.2	12,672.8 / 16.2	— / —	— / —	— / —	— / —
Foreign controlled companies	282.3 / 06.0	— / —	— / —	— / —	— / —	— / —	— / —	— / —	— / —	— / —
Net assets of local branches [g]	1,391.6 / 29.7	— / —	3,314.4 / 22.0	6,135.8 / 18.9	7,643.3 / 15.4	7,625.0 / 09.8	— / —	— / —	— / —	— / —
Total [h]	**4,677.5 / 100.0**	**5,329.2 / 100.1**	**15,084.4 / 100.0**	**32,420.4 / 100.0**	**49,708.1 / 100.0**	**77,964.4 / 100.0**	**108,377.4 / 100.0**	**179,792.2 / 100.0**	**310,076.4 / 100.0**	**390,821.6 / 100.0**

[a] The ownership of share capital (at par value) classification as adopted by the *Ownership Survey of Limited Companies* is based on the shareholder's residential address, and not on citizenship. Malaysian residents are persons, companies or institutions living in or located in Peninsular Malaysia, Sabah or Sarawak. This definition therefore includes foreign citizens residing in Malaysia. [b] Figures for 1970 do not add up to 100 per cent due to rounding. [c] The figures for 1980 are based on the *Ownership Survey of Limited Companies*, cited in Malaysian government plan documents. [d] This category represents ownership by individual *bumiputeras* including their funds channelled through institutions such as the Lembaga Urusan dan Tabung Haji (LUTH); Majlis Amanah Rakyat Unit Trust Scheme; various cooperatives; and the Amanah Saham Nasional (ASN) scheme. [e] This category represents ownership by trust agencies such as the Permodalan Nasional Berhad (PNB); PERNAS International Holdings Berhad (PERNAS); Majlis Amanah Rakyat; state economic development corporations (SEDCs); Bank Pembangunan Malaysia Berhad (BPMB); Urban Development Authority (UDA); Bank Bumiputera Malaysia Berhad (BBMB); Kompleks Kewangan Malaysia Berhad (KKMB); and Food Industries of Malaysia (FIMA). It also includes the amount of equity owned by the government through other agencies and companies that have been identified under the Transfer Scheme of Government Equity to Bumiputeras. [f] This reflects the total share capital of limited companies whose ownership could not be disaggregated further and assigned beyond the second level of ownership, to specific ethnic groups. [g] This category refers to the difference between the total assets and liabilities in Malaysia of companies incorporated abroad. This approach is used because the criteria for equity share capital cannot be applied to such companies. [h] Except for 1969, the totals exclude government holdings other than through trust agencies. **Source:** Government of Malaysia 1971:40, 1976:184, 1981:62, 1984:101, 1986:107, 1989, 1996:86, 2001a:64.

Sources: Adapted from Jomo (2004).

effects of bumiputra and non-bumiputra ethnic ownership on the extent of corporate risk disclosure.

1.5 CHAPTER ORGANIZATION

Chapter one provides an introduction to this thesis together with an outline of the key objectives of the research. This chapter also covers the research motivation and contribution as well as an overview of the Malaysian business environment.

Chapter two discusses the issue in corporate disclosure; begin with special focus on the debate of mandatory and voluntary disclosure as well as disclosure principle with the signalling and proprietary cost theories. The chapter then discusses the regulatory context for this study. After that, the chapter discusses corporate risk disclosure definition, classification and related literature on risk-related disclosure. This is followed by a comprehensive review of the upper echelons characteristics, ownership structures and value-relevance of corporate risk disclosure. This covers upper echelons theory, agency theory and value-relevance model.

Chapter three presents the empirical schema of this study, which includes upper management characteristics, ownership structures and context-specific factors. The aim is to understand what influences managers to disclose additional risk information regarding their firms. This is followed by a section devoted to explaining hypotheses development. Following this, the sample selection, measurement of dependent and independent variables are discussed. Then, a regression model presented on the relationship between corporate risk disclosure and the determinants used in this study as well as its value-relevance model.

Chapter four describes and reports the results of content analysis. It gives a broad explanation of the results of content analysis. Hypothesis, H_{01} will be tested in this chapter. A discussion of the results will be given.

Chapter five reports the results of empirical analysis which examines the relationship between corporate risk disclosure and upper management characteristics and ownership structures. The chapter also constitutes the empirical analysis of value-relevance of

corporate risk disclosure (that is, the impact of risk disclosure on the firm value). Then the results of this chapter are explained and discussed.

Chapter six summarizes and concludes the overall results and acknowledges contributions, implications, scope and limitations of study as well as suggestions for further research.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

In corporate reporting literature, the issue of corporate risk disclosure has been fairly developed into a substantial field for investigation. This development of risk disclosure literature has been pursued in three areas. The first area is about the debate between mandatory and voluntary risk disclosures and what motivates companies to disclose more risk information beyond the level required by regulation. The second area concerns the factors affecting the level and type of risk information disclosed. For example, managements must have motivations or factors to influence them to reveal risk information to the public (especially in the annual report). A number of previous studies on the theoretical perspectives have been applied by researchers to explain the phenomena of risk disclosure. The third area concerns the empirical consequences of risk disclosure on the company's firm value based on stock prices. This is because incentives for managers to produce risk information within their firms also derive from capital market forces.

The remainder of the chapter is organised as follows. Firstly, Section 2.2 offers a discussion on the literature relating to the relationship between mandatory and voluntary disclosure in general, and risk disclosure in particular. The discussion will assess the arguments for and against regulating financial reporting and also address the effects of such regulations on voluntary corporate (risk) disclosure. Secondly, Section 2.3 reviews the disclosure principle, signalling theory and proprietary cost theory. Thirdly, prior studies relating to corporate risk disclosure are discussed, summarised and presented in Section 2.4. The theories and previous literatures on risk disclosure discussed in Sections 2.2 to 2.4 are reviewed in order to form the first research hypothesis for this study. Fourthly, the first group of factors affecting the level and type of risk information disclosed are discussed in Section 2.5 using upper echelons variables. All the variables represent the most common upper echelons characteristics tested in previous research based on the upper echelons theory in relation to corporate disclosure in general and corporate risk disclosure in particular. Fifthly, the second group of factors affecting the

level and type of risk information disclosed using the type of ownership structure is discussed in Section 2.6. These ownership structures comprise of family ownership, government ownership and foreign ownership. Then, Section 2.7 discusses the empirical consequences of corporate (risk) disclosure to the firm value. Finally, a summary and conclusion is presented in Section 2.8.

2.2 MANDATORY AND VOLUNTARY DISCLOSURE DEBATE: AN OVERVIEW OF RISK DISCLOSURE

Disclosures in corporate reports are often distinguished based on whether they are mandatory or voluntary. Mandatory disclosure refers to information disclosure required by legislation. Voluntary disclosure refers to the level of information disclosed beyond what is imposed by accounting standards and legal regulations. Companies must disclose corporate information to satisfy and to create investors' confidence since they are regarded as the main providers of capital to the company. In the fairness of the capital market, the information disclosed is also to help investors to achieve better investment decisions for their capital allocation. It has been argued that corporate provision of information needs to be regulated to ensure that external users receive some minimum amount of disclosure. This is because of information asymmetry.

Managers of a company have a superior understanding of the future prospects of the firm since they have access to private information. This private information is needed by investors and other users (e.g., creditors) for different purposes. However, such information is not freely attainable by all parties that have an interest in the transaction; therefore companies must disclose information to satisfy the variety needs of users. Since information disclosed may potentially affect an investor's decisions and actions, disclosure is in fact a substantive issue. Proponents of regulation have doubted whether companies on their own could be trusted to report information fully and truthfully. This is because there is quite a tendency for companies to hold back the disclosure of unfavourable information (e.g. Verrecchia, 1983). As a result, they argue that accounting and other corporate information needs to be regulated to prevent companies from giving misleading reports and to safeguard the interest of the public. Since the market for information may not be efficient, the optimum amount of information may not be generated without regulatory intervention. Thus, regulating

corporate information could potentially benefit smaller investors and protect individuals who are at an information disadvantage (Brown *et al.,* 2008).

Wolk and Tearney (1997) summarize the merits in favour of regulating the provision of corporate financial information. The idea of mandating the standardized provision of financial information will rather lead to consistency of disclosure among companies, increasing comparability, and in turn financial reporting quality may also improve. Moreover, Wolk and Tearney (1997) argue that mandatory public reporting also enhances the perceived fairness of the capital market and may reduce the total cost to society of acquiring the information. Market failure is commonly viewed as a reason in the argument for regulation in accounting information.

> Since the firm is a monopoly supplier of information about itself, it may be cheaper for society to require mandatory free disclosure rather than to have individual investors privately contracting for the same information and paying monopolistic prices. (Wolk and Tearney, 1997, p. 98)

Furthermore, Wolk and Tearney (1997) argue that market failure can be due to the failure of the accounting and auditing profession in preventing frauds and bankruptcies in companies. They argue that as a result, criticism of the profession arises. According to Wolk and Tearney (1997, p. 93):

> The criticisms generally have focused on the alleged low quality of financial reporting, even under regulation. The reasons cited for this are poor accounting and auditing standards, too much management flexibility in the choice of accounting policies and occasional laxity by auditors. Corporate frauds undetected by auditors and corporate failures not signalled in advance by either financial statements or audit reports are cited as evidence that the financial reporting system is failing to protect the public interest.

Another point is that, accounting information itself can lead to market failure. Wolk and Tearney (1997) argue that accounting information is a public good, whereby once the information is available, it can be consumed by many people without reducing the opportunity for consumption by others. According to them, public goods are under produced in a free market due to externalities. They argue that due to existence of

externalities, producers of a public good has a very limited incentive to produce it because all consumers cannot be charged for the good, as there are free riders to the goods. They argue that these free riders lead to under production of goods, and thus resulting in market failure because producers are not motivated to meet the actual demand for the goods.

Proponents of regulation argue that regulatory intervention is therefore highly necessary in order to increase the production of accounting information. Previous studies have looked into the case of externality in relation to the accounting information disclosure by companies. For example, Foster (1981) suggests that if there are externalities of disclosure, that is, the disclosure of information by one firm which also express information about other firms, mandatory disclosure requirement is collectively desirable since the firms disclose too little information voluntarily. Additionally, Admati and Pfleiderer (2000) study a securities market with costly disclosure where there are positive disclosure externalities and they analyse a model in which someone might benefit from mandatory disclosure rules. Essentially, they show that mandatory disclosure might benefit securities issuers because of the externality.

Proponents of regulation also argue that regulation should be imposed in order to achieve social goals that are not met by a free market even when there is no market failure. For the fairness of capital market, they argue that accounting information really needs to be regulated so that all potential investors have equal access to the same information. This has been agreed by Suijs (2007) who explains that mandatory disclosure regulations will improve the efficiency of the investor's capital allocation by facilitating the investor to distinguish good investment opportunities from the bad ones.

Opponents of regulation on the other hand, contend that a competitive capital market produces good voluntary reporting. They argue that managers have incentives to disclose the firms' private information in order to distinguish their firms from weaker firms (Dye, 1990). Moreover, due to the competitive pressure for capital, it is completely to the best interest of the company to voluntarily disclose more information than is required. This is because potential investors may perceive it as a responsible reporting firm and will increase confidence by investors since the information revealed has the potential to influence their decisions for their investment.

Jovanovic (1982) establishes a model on the basis that the free market offers enough incentives for businesses to disclose information about the quality of their product. From his model, he concludes that in a world where false claims or misrepresentation of quality disclosure is unfeasible, the free market offers great incentives for disclosure. He states that '...whether information is of purely private value or not, more than the socially-optimal amount of disclosures takes place' (Jovanovic, 1982, p. 36). His model finds no support for business to have the policy of mandatory disclosure.

Dye (1990) further compares mandatory and voluntary disclosure policies in the case of externalities. He argues that firms would voluntarily go for the policies that an accounting standard boards would mandate. Moreover, Dye (1990) points out that a disclosure made by one firm can create either real or financial externality. According to Dye (1990, p. 19), real externality is when disclosures by one firm can alter investors' actual distribution of other firm's cash flows. He argues that where real externalities are present, optimal mandatory and equilibrium voluntary disclosure be likely to swerve. In such situation, Dye (1990) asserts that mandatory disclosure is necessary. Financial externality on the other hand takes place if disclosures by one firm can only alter investors' perceptions about the distributions of other firms' cash flows (Dye, 1990). In this situation, optimal mandated disclosures simply coincide with firm's voluntary disclosure decisions; therefore according to Dye (1990), mandated disclosures are unnecessary.

Equally, Teoh and Hwang (1991) suggest that voluntary disclosure may ultimately provide more information to investors, and in consequence mandatory disclosure regulations can be detrimental. In their model, Teoh and Hwang (1991) explain that voluntary disclosure can be superior to mandatory disclosure because the latter only indicates whether the information is good or bad but not indicate whether the firm is of high-quality or low-quality. Given that zero informational asymmetry is not possible, they argue that mandatory disclosure leads to a similar possibility when there is informational asymmetry. Therefore, Teoh and Hwang (1991) conclude that aside from direct costs of disclosure, the policy to have legally mandated disclosure in securities markets is not necessary.

Prior studies have been undertaken by earlier researchers on the relationship between mandatory and voluntary disclosures. However, their empirical and theoretical studies indicate mixed findings. There are two main issues revolving this area in the effect of mandatory requirements on voluntary disclosure. On the one hand, based on the general assumption, as mandatory reporting requirements become more detailed, voluntary disclosures may decline (Nagarajan and Sridhar, 1996; Dye, 1985; Verrecchia, 1982; Gonedes, 1980). On the other hand, mandatory and voluntary disclosures could complement each other (Dobler, 2005; Taylor and Redpath, 2000; Chow *et al*., 1996; Dye, 1986) or could be trade-off each other (Fishman and Hagerty, 2003).

Dye (1985a) evaluates the effects of mandatory changes in accounting standards on firms' voluntary decisions. He assumes that a firm's choice among reporting requirements is influenced by how that choice alters the firm's ability to protect its proprietary information. Proprietary information can be described as any valuable commercial information which is confidential to the business with an advantage over competitors who do not have that information. Non-proprietary information on the other hand can be described as any information that can be made public. In his analysis of the effects of mandatory changes in accounting standards on firms' disclosure decisions, Dye (1985a, p. 546) concludes:

> ... by imposing more detailed reporting requirements, accounting boards do not necessarily increase investors' knowledge of firms' future earnings prospects. This result can occur for either of two reasons: (1) mandatory and voluntary disclosures are sometimes substitutes, so the "amount" of information produced by "more detailed" mandatory reports may be offset by a reduction in voluntary disclosures; or (2) firms may be able to reveal information by their actual choice among accounting techniques (since accounting choice may be a signal of private information...), so the mandatory use of a "more detailed," but uniform, accounting procedure may remove this potential source of information.

Nevertheless, an insight behind the mandatory and voluntary disclosures complementary concept has been illustrated in Dye (1986). His model consists of cases where managers are endowed with both proprietary and non-proprietary information. Dye (1986) concludes that mandatory and voluntary disclosures are complements when

mandatory disclosures encompass reports of a firm's non-proprietary information. In his model, Dye (1986) assumes that a manager's private information comprise two signals, *x* and *y*, where the disclosure of x is assumed to not incur proprietary costs while the disclosure of y will incur proprietary costs. He also argues that mandating the disclosure of the non-proprietary information x will affect the voluntary disclosure of y. For the optimal disclosure, Dye (1986) argues that the increase in mandatory disclosure of non-proprietary information will reduce the benefits of withholding correlated proprietary information. The effect is an increase in incentives to disclose voluntarily the correlated proprietary information.

Chow *et al.* (1996) embark on a laboratory experiment to test the hypothesis based on Dye (1986) in which the mandatory disclosure of non-proprietary information induces an increase in the disclosure of correlated proprietary information. In the setting of disclosure policies concerning the withholding of proprietary information, Chow *et al*. (1996) fail to confirm Dye's (1986) model. In their discussion, they conclude that mandatory disclosure of information had no significant impact on the voluntary disclosure of correlated proprietary information. However, a study by Taylor and Redpath (2000) also test Dye's (1986) model and examines the relationship between mandatory and voluntary disclosure of financial instruments for mining companies in Australia. From their content analysis of financial reports, Taylor and Redpath (2000) support Dye's (1986) hypothesis that an increase in mandatory disclosure is paralleled by an increase in voluntary disclosure of related information.

In a different vein, Fishman and Hagerty (2003) conclude that there is a trade off between the role of mandatory disclosure and voluntary disclosure. They conduct a study of a firm which discloses information about product quality to consumers. In their model, Fishman and Hagerty (2003) assume that there are both informed and uninformed customers. Informed customers who can understand the disclosure can use the disclosure effectively and value it more while uninformed customers who cannot understand the meaning of such disclosure will observe the disclosure differently. In this setting, they argue that there are a trade-off between the role of mandatory disclosure and voluntary disclosure. Fishman and Hagerty (2003) show that if there is too low fraction of customers who can understand a disclosure, voluntary disclosure may not be forthcoming. On the other hand, informed customers are at an advantage as

compared to uninformed customers if there is mandatory disclosure. Fishman and Hagerty (2003, p. 47) generalize that '...mandatory disclosure can make informed customers better off, leave uninformed customer welfare unchanged, make the seller worse off and either increase or decrease aggregate welfare.' Therefore, they suggest that where product information is relatively difficult to understand, mandatory disclosure should be found necessary.

Corporate risk disclosure in actual fact has not been without its share of the issue of mandatory and voluntary disclosures. Risk disclosure would be useful for investors when making informed decisions as it reduces uncertainty and reduces information asymmetries by raising confidence in the market. Following the pace of change in business nowadays, companies may choose to disclose additional risk information to gain benefit (such as trust) from the present and future investors. Earlier studies on risk disclosures have provided strong evidence that companies have not sufficiently disclosed risk-related information in their annual reports under a voluntary reporting regime (e.g. Oliveira *et al*., 2011; Abraham and Cox, 2007; Linsley and Shrives, 2006, 2005; Lajili and Zegal, 2005; Solomon *et al.*, 2000). A lack of adequate revelation of voluntary risk information by companies could entirely generate an investor's demand for additional information about risk through compulsory risk disclosures. Thus, the results obtained under voluntary risk disclosure can offer a benchmark to establish whether imposing mandatory regulation will bring on more or less risk disclosures within a voluntary disclosure regime (Dobler, 2005). In a voluntary reporting regime, although some discretion is intrinsic to the nature of risk reporting; imposing regulation by mandating risk disclosure type and format may set a boundary to the levels of discretion as compared with voluntary reporting.

Initial work by Solomon *et al*. (2000) uses a questionnaire survey of the UK institutional investors to ascertain their attitudes towards risk disclosure in relation to their portfolio investment decisions. Solomon *et al*. (2000) find that there is a need to provide more detailed risk disclosures rather than generalized statements of business risk management policy. However, they conclude that the results from the survey show that respondents did not generally favour a regulated environment for corporate risk disclosure and supported a voluntary framework. Hence, Solomon *et al*. (2000) conclude the need for legislation seems detrimental.

Linsley and Shrives (2000) review risk disclosure requirements and recommendations and examine the merits and demerits of disclosing such information in annual reports. They suggest that the most important potential benefit for enhanced risk disclosure by companies is reduction in the cost of capital. Linsley and Shrives (2000) conclude that the level of information disclosed voluntarily by companies is not adequate. They argue that if such disclosure is considered desirable then there is a strong argument for regulation.

In another article, Linsley and Shrives (2005) discuss similar issues but within the context of the UK public companies annual reports. From their content analysis, Linsley and Shrives (2005) find that directors seem to disclose forward-looking information[7]. However, they argue that directors are not supplying a complete picture of risks they are facing. Linsley and Shrives (2005) argue that since directors are not convinced by the professional bodies regarding the benefits associated with greater voluntary risk disclosure, mandatory requirement is needed. They finally conclude that only by enforcing disclosure of risk information through legislation enacted by the UK government could increase the risk reporting by companies.

Given a call for regulatory intervention, empirical evidence implies that by imposing mandatory requirement for firms to report on their risks, risk disclosures in the annual report seem to improve slightly. Earlier risk disclosure requirements focus mainly on the mandatory reporting of derivative financial instruments (e.g. Othman and Ameer, 2009; Hassan *et al*., 2008; Chalmers and Godfrey, 2004; Chalmers, 2001). Chalmers and Godfrey (2004) examine the derivative financial instruments disclosure practices of Australian firms during the voluntary disclosure period from 1992–1996. During this period, the exposure drafts on financial instrument disclosure and the ASCT Industry Statement 'Derivative Disclosure' had already been issued in Australia. By comparing the changes in the mean voluntary disclosure index for each reporting period, their evidence indicates that there was an increase in the disclosure of derivative information provided by firms during the voluntary disclosure period from 1992-1996. Chalmers and Godfrey (2004) thus conclude that it is necessary to impose mandatory disclosure requirements for derivative instruments disclosure, as companies have no tendency to

[7] Forward-looking information is a type of risk information.

make such voluntary disclosures prior to such requirements being proposed by the professional organization or the accounting standard setters.

In the Malaysian context, Hassan *et al.* (2008) argue that a lack of proper reporting guidelines on the reporting of the market financial instruments may lead to weak disclosure of the firms' financial instruments. In their study, Hassan *et al.* (2008) measure disclosure quality of financial instruments of Malaysian firms listed in the Bursa Malaysia based on the Malaysian Accounting Standard Board (MASB) 24 *Financial Instruments: Disclosure and Presentations*. They find that the disclosure quality among Malaysian firms is low prior to issuance of MASB 24 (year 1999 and 2000) and increased after the issuance of MASB 24 (year 2002 and 2003). Hassan *et al.* (2008) suggest that effective enforcement mechanisms are helpful to ensure high quality reporting by companies.

Othman and Ameer (2009) investigate the market risk disclosure practices among Malaysian listed firms for the year 2006. This is the first year in which all Malaysian public listed companies need to comply with Financial Reporting Standards instead of MASB. MASB has introduced FRS132 *Financial Instruments – Disclosure and Presentation* (to replace MASB 24) to be adopted by Malaysian firms in reporting the type of market risk being faced by those firms. Othman and Ameer (2009) observe that there are variations on the level of financial risk management policy disclosures across companies in their study. Therefore, to achieve greater financial transparency by companies, Othman and Ameer (2009) argue that there is a need for some standardized risk reporting format which comprise of qualitative and quantitative information to make investors aware of the market risks.

Recent studies by Oliveira *et al.* (2011) assess the risk-related disclosure practices by Portuguese non-finance companies for the year 2005. This is the year in which Portuguese listed companies became obliged to comply with *International Accounting Standards* (IAS/IFRS) and the *Modernisation Directive* (Directive 2003/51/EC) of the European Parliament and Council. Though these two regulatory initiatives demanded extra risk-related disclosure, Oliveira *et al.* (2011) reveal that their adoption did not affect the quantity and quality of risk-related disclosure positively. They argue that, 'risk information disclosures were mainly vague, generic, qualitative, backward-

looking, dispersed throughout the annual report, and inadequate for the information needs of stakeholders' (p. 818).

However, mandatory requirements of risk-related information to accounting rules and regulations do not attempt to tackle financial risk other than those stated in the financial reporting standards and any other risks related to non-financial risk (Cabedo and Tirado, 2004; Dobler, 2008). In this case, Germany can be given a prominent exclusion since it has a separate standard *German Accounting Standard* (GAS5) requiring a comprehensive and self-contained risk report located in the management report (e.g., Beretta and Bozzolan, 2004; Dobler, 2008).

Overall, different views exist on the need for mandating risk disclosure. Accounting rules and regulations are needed in the incomplete and imperfect market whereas in a complete, perfect and ideal market situation, the regulations are not needed. Since the latter is not likely to be achievable, disclosure regulations could deal with the information gaps in the market. This is to ensure that investors can make informed decisions with quality information such as up-to-date risk information. Therefore, regulations to some extent favour increasing risk disclosures, hence, increasing investors' confidence (Healy and Palepu, 2001). Although regulations are alleged to be efficient in increasing the level of information disclosure, mandatory risk disclosure does not necessarily work to change significantly the results obtained under voluntary disclosure (Dobler, 2005).

2.3 DISCLOSURE PRINCIPLE, SIGNALLING THEORY, PROPRIETARY COST THEORY AND CORPORATE DISCLOSURE

In theory, a pure free-market economy is characterized as a perfect and complete market without information asymmetry or barriers that would prevent fair and efficient market process. However, such perfect free market conditions do not exist in practice in which the economy is characterized by information asymmetry where some parties to a transaction may have an information advantage over others. The disclosure principle, signalling theory and proprietary cost theory have been used by prior researchers as proposed solutions to address the information problem arise from the information asymmetry.

2.3.1 The Disclosure Principle

The early analytic work on information economics attributed to Grossman (1981) and Milgrom (1981) suggests that managers of firms will release all information (full disclosure) they possess regardless of whether the information is good or bad. This is known as the disclosure principle. Early literature on disclosure also suggests that managers will voluntarily report all information to maximize the value of the company (Viscusi, 1978; Grossman and Hart, 1980; Grossman, 1981; Milgrom, 1981; Verrecchia, 1983; Dye, 1985, 1986; Jung and Kwong, 1988). Based on the seminal results of Grossman (1981) and Milgrom (1981) on corporate disclosure policy, Suijs (2007) summarizes the assumptions required for the disclosure principle to apply. According to Suijs (2007, p.394) there are five assumptions as follows: (i) the disclosure is costless, (ii) investors know that the firm has private information, (iii) the firm can credibly disclose its private information to investors, (iv) all investors will respond to disclosure decision in the same way and (v) the firms knows how investors will respond to disclosure of its private information.

The disclosure principle introduced by Grossman (1981) arises from the so-called unravelling arguments (Suijs, 2007; Shin, 1994). In its simplest form, unravelling arguments suggest that if all those five assumptions above are satisfied, then a company will continue to unravel of its private information until it attains full disclosure results. However, the recent study by Suijs (2007) concludes that previous analytic research on the disclosure principle demonstrates that firms are not inclined to provide full disclosure.

Earlier study about full disclosure by Milgrom (1981) focuses on the concept of the favourableness of news. He applies this concept into his security market model and moral hazard model. In each of the models, the analysis is driven by a strategy for full disclosure by a company. First, in the security market model Milgrom (1981) argues that the disclosure of favourable news about a security's future returns will cause the security price to rise. Second, in the moral hazard model of principal-agent, Milgrom (1981) argues that when the agent's effort are evidenced by high profits, the optimal incentive contracts entails a steeper fee schedule than does any efficient risk sharing contract**.**

Jung and Kwong (1988) introduce a study on the notion of uncertainty about the existence of private information by managers. They argue that when investors believe that managers have received information but there is a probability that they have not disclosed it, the investors will infer the content of such information to be unfavourable. Additionally, Jung and Kwong (1988) argue that the possibility that investors have acquired credible information from other independent sources such as financial press or financial analyst may result in the disclosure of information by managers rather than to withhold the information in the first place.

Chow *et al.*'s (1996) laboratory experiment tests the validity of the disclosure principle. Their basic premise is that when disclosure costs are zero, managers will voluntarily disclose all news, good and bad. Their findings fail to support this disclosure principle or premise. Chow *et. al.* (1996) indicates that even when disclosure is costless, managers will not disclose all news. They argue that managers still withhold information even when disclosure cost is zero. In this circumstance, although investors do price-protect themselves by offering a lower price for the company, the price penalty that investors impose is not enough to cause full disclosure. Additionally, Chow *et al.* (1996) find that when there is positive disclosure cost, investors will reduce the price penalty that they impose for non-disclosure, resulting in managers disclosing proportionally less news. Chow *et al.* (1996, p. 149) concludes that 'market incentives are not sufficient to induce full financial disclosure'.

In another article, Teoh and Hwang (1991) in their model agree that not all information will be disclosed even though the disclosure is costless and credible. They argue that the non-disclosure of information will allow managers to communicate other valuable information more credibly to the market.

Campbell *et al.* (2001) also apply the disclosure principle in their study to examine the purpose of voluntary disclosure of mission statements in corporate annual reports. In their study, Campbell *et al.* (2001) argue that the 'revelation principle' (that is, all managers have incentives to disclose information to ensure that their companies are not undervalued) does not lead to full disclosure because of disclosure costs. They argue that some proprietary information may not always be disclosed but non-proprietary information will normally be disclosed. Disclosure costs are undoubtedly non-zero and

Campbell *et al.* (2001) believe that the way the mission statements are written make the mission statements contain non-proprietary information. They conclude that companies should maximize their disclosures of non-proprietary information and to some extent this could generate some increase in shareholder value.

Suijs (2007) in his study to test the soundness of the disclosure principle shows that if firms are uncertain about investors response to the disclosed information, full disclosure will not occur. In his model, Suijs (2007) finds that equilibrium with full disclosure exists with sceptical beliefs of the investor. This suggests that investor will infer non-disclosure to be a signal of poor quality. He also finds that equilibrium with no disclosure exists if the risk of an unfavourable response by the investor is too high. In equilibrium, Suijs (2007) argues that disclosure takes place because firms want to attract investor capital away from the risk-free asset. In this setting, Suijs (2007) argues that the unravelling argument that yields full disclosure need not apply.

2.3.2 Signalling Theory: Corporate Voluntary and Risk Disclosure

The concept of signalling theory which was first studied by Akerlof (1970) and Spence (1973) in the context of product and job markets has explained the behaviour of information asymmetry in these markets where there are many sellers and many buyers. Accordingly, Spence (1973) has developed the concept of signalling into an equilibrium theory which outlines the model of signalling in the job market. Spence (1973) also argues that equilibrium exists when the potential employer can distinguish among individuals of varying productive capabilities based on their level of education as a credible signal. In another article, Spence (1974) discusses similar issues in a model of two types of workers: 'good' workers and 'bad' workers. Ross (1977) further established a signalling equilibrium in the financial market using managerial incentive structure where managers will signal their use of debt financing in their financial structure to signal that they are a high quality firm.

Previous studies suggest that signalling theory can also be applied to the area of corporate disclosure (Campbell *et al.,* 2001; Watts and Zimmerman, 1986). According to Akerlof (1970), voluntary disclosure can be viewed as a form of signalling of the information asymmetry in the market. Generally, many researchers have explained

cross-sectional variation in corporate voluntary disclosure (Oliveira *et al.*, 2006; Abd-Elsalam and Weetman, 2003; Hossain *et al.*, 1994). Discretionary models of disclosures which focus on a situation where there is asymmetric information assume that managers of firms possess more information (such as a firm's risk exposure) than outsiders. The existence of information asymmetry between the firm and investors may produce the problem of adverse selection (Akerlof, 1970) leading to the withdrawal of uninformed investors from the market, resulting in lower trading volume or total market breakdown (Lev, 1988). However, this information asymmetry can be reduced if the party with more information signals to others (Celik *et al.*, 2006; Morris, 1987). In this case, disclosure could be seen as one of the mechanisms to mitigate adverse selection by reducing information asymmetry between managers and investors.

Signalling theory also explains managers' incentives to disclose more information in the annual reports (Haniffa and Cooke, 2002) since managers are always in the position to convey specific signals to current and potential investors about the company. According to Hughes (1986), in order for managers to effectively signal quality of their information, the signal must be credible. Hughes (1986) suggests that if managers fraudulently or falsely signal their situation (for example, they are signaling high quality, when in fact there is not), the company will be penalized.

Skinner (1994) addresses voluntary disclosure information in regards to earnings-related disclosure. In his study, Skinner (1994) provides empirical evidence that firms disclose earnings forecasts regardless of whether it is good news or bad news. He finds that managers will disclose good news to signal the quality of their firm and to distinguish themselves from lower quality firms. On the other hand, he argues that managers voluntarily disclose bad news because of reputation-effects arguments. Skinner (1994, p.39) states that 'managers may incur reputational costs if they fail to disclose bad news in a timely manner.' Skinner (1994, p.40) also argues that '...to prevent large stock price declines on earnings announcement dates (and thereby reduce the potential costs of shareholder suits), managers have incentives to pre-empt the announcement of large earnings surprises.'

In essence, a manager of a firm may choose to reveal or to withhold the firm's private information. There are two reasons of why firms voluntarily disclose information or

withhold it, according to Skinner (1994). First, a manager of a firm will disclose the information if all other firms in the same industry disclose the information for fear that 'no news is bad news'. Disclosing bad news could be a concerned by the manager, however investors possibly will make an estimation that the silence implies that the firm has very bad news to disclose. Second, a manager of a firm will only disclose the information if after publication the firm's value does not fall below the level appearing in absence of disclosure.

Most evidence from prior research suggests that a manager will only disclose most favourable news (e.g. Fishman and Hagerty, 1990; Dye, 1986, 1985; Verrecchia, 1983). However, in other circumstance, a manager will disclose unfavourable news and withhold favourable news (e.g. Teoh and Hwang, 1991). According to Teoh and Hwang (1991), the decision of whether to disclose or withhold information will ultimately depends on the type of disclosure and the choice of signal. Teoh and Hwang (1991, p. 286) argue that:

> Firms will not necessarily disclose fully even if information is favourable. Our analysis also suggests that it may be socially worthwhile to allow some information to be withheld, if the fact of concealment itself allows managers to communicate other valuable information more credibly to the market at a later date. Thus, the firm's strategic timing of disclosure can be informative to investors.

Of relevance to this study, the application of signalling theory is specifically considered in the area of corporate risk disclosure. Review of previous literature (Elzahar and Hussainey, 2012; Hemrit and Arab, 2011; Rajab and Handley-Schachler, 2009; Hassan, 2009; Marshall and Weetman, 2007; Linsley and Shrives, 2006, 2005) shows that signalling theory has been widely used to study corporate risk disclosure in either annual reports, interim reports or in prospectuses.

Signalling theory may explain the motivation behind the disclosure of voluntary risk information since it is a reaction to information asymmetry in the markets. As companies' managers have superior risk information, they could decide whether to disclose only important or also additional risk information to their investors. However, Linsley and Shrives (2000) argue that managers who believe that they are superior risk

managers tend to signal this to stakeholders through the statement of business risk. According to Hemrit and Arab (2011), such information could signal managers' risk management skills, performances and experiences to convince the market that they can appropriately manage risk. In other words, companies with high quality risk management systems will continually have an incentive to provide and contribute their specific risk information to the market as a signal of their ability and competency as well as to reap the benefits from making these additional risk disclosures.

Aljifri and Hussainey (2007) explore the determinants that may affect the extent of forward-looking information[8] by 46 companies listed in either the Abu Dhabi securities market or the Dubai financial market. By performing backward regressions, they find that firms with high debt ratio and low profitability are more likely to disclose forward-looking information. As evidenced by previous studies, Aljifri and Hussainey (2007) conclude that low profitability and high debt could be used as indicators of firms' risks. Hence, they suggest that firms with high financial risks might be more motivated to increase their forward-looking information disclosure and this could be a positive signal by the market and may reduce cost of capital of the firms.

In a comparative study of the US and the UK in the case of foreign exchange risk management disclosure, Marshall and Weetman (2007) model the degree of transparency observed when disclosures of foreign exchange risk management in financial statements are compared to managerial information on foreign exchange risk management policy. In their study, Marshall and Weetman (2007) use leverage and liquidity as proxies for perceived financial risk. They find that the disclosure of leverage is positively and significantly related to increase the level of disclosure relating to foreign exchange risk management in both countries. Supporting signalling theory, they suggest that firms with higher levels of perceived financial risk have an incentive to deliver more information about foreign exchange risk, to convince the users of financial statements that foreign exchange risk is not a significant setback for the firm when combined with financial risk. Marshall and Weetman (2007) also find that both

[8] According to Aljifri and Hussainey (2007, p. 883), 'forward-looking disclosure involves non-financial information such as risks and uncertainties that could significantly affect actual results and cause them to differ from projected results.'

managers of the UK and the US firms give more information about foreign exchange risks when there is a higher level of financial risk whereas when there is higher liquidity only managers of the UK firms signal more information about foreign exchange risk.

Corporate disclosure is very imperative and crucial for the functioning of capital markets as well as for the stability of the economy (Lev, 1988; Akerlof, 1970). Similarly, as risk disclosure will put companies in direct contact with the capital market, companies could highly reach the best price for their shares. This will be reflected in the companies' stock price. Past research within disclosure area which examines the association between corporate information disclosure and the firm value (e.g., Lev and Penman, 1990) argue that corporate disclosure, as a signal to the market, may provide investors with appropriate corporate information and could increase firm value.

In their study, Lev and Penman (1990) consider managerial earnings forecasts as voluntary information releases and compare their properties with predictions from a signalling scenario. In such a scenario, they suggest that earnings forecasts are used by managers of 'good news' firms to signal themselves out from other firms. Lev and Penman (1990) compare stock price changes of forecasting firms with those of firms which did not provide a forecast contemporaneously. They argue that the signalling motive by firms with earnings forecasts will separate them from similar firms (that is, firms in the same industry) and used by investors to adjust the price upwards.

If information available to the market is unclear, then share prices will reflect general perceptions of risk and, hence, this may result in some mispricing together with the phenomenon of adverse selection (Akerlof, 1970). Beatty and Welch (1996) find a positive relationship between the number of risk warnings disclosed in flotation prospectuses and mispricing at the end of the first day of trading. In order to facilitate and influence external users when making decisions for different purposes, financial information may be used by managers to indicate the firm-specific information as well as to imply its underlying reality (Inchausiti, 1997). Through these disclosures in the financial reports, external users will have a better understanding of the true picture of the overall business economic environment.

In addition, the frequency and quality of voluntary risk disclosures will have an industry effect. Signalling theory suggests that firms operating within the same industry are more likely to adopt the same level of disclosure (Aly *et al*., 2010). If a firm does not follow similar disclosure practices as other firms within the same industry, then it may be interpreted as a signal of hiding bad news (Elzahar and Hussainey, 2012; Lopes and Rodrigues, 2007). Dye and Sridhar (1995) argue that the voluntary disclosure made by some firms will ultimately persuade other firms in the industry to make similar disclosures. Dye and Sridhar (1995) suggest that under certain conditions, if several firms disclose the information under consideration, the other firms will follow. This is known as a so-called herd-effect. This herd-effect may apply to industry-wide practice of risk disclosure, but it cannot enforce the disclosure of risks arising from firm-specific factors. Dye and Sridhar (1995) also suggest that each firm is more likely to release (if any) its information if the availability of that information is perfectly correlated among all firms. This implies that small industries are more likely to remain secretive than larger industries.

Hassan (2009) investigates the relationship between corporate risk disclosure level and the United Arab Emirates (UAE) corporations-specific characteristics. Based on a sample consisting of financial and non-financial UAE corporations listed in either Dubai Financial Market or Abu Dhabi Securities Market, he finds that industry membership is significantly related to the level of corporate risk disclosure. Hassan (2009) argues that corporate risk disclosure varies in line to the industry type and corporations in the same industry fairly replicate other corporations in order to signal to investors that they are implementing analogous disclosure practices as other firms in the same industry.

Nonetheless, signalling is costly and the cost of signal is higher for ‘bad news’ type of information than it is for ‘good news’ information (Spence, 1973). The incentive to make disclosures in order to differentiate a company from its rivals will only continue for as long as the resulting increase in market capitalisation exceeds the signalling cost (Morris, 1987). It is argued that the market will punish the firms that send wrong signals because the quality of firms can later be observed without difficulty (Inchausiti, 1997; Morris, 1987).

2.3.3 Proprietary Costs: Corporate Voluntary and Risk Disclosure

Existing literature on proprietary cost has been developed by previous researchers in the area of voluntary disclosure (Wagenhofer, 1990; Darrough and Stoughton, 1990; Verrecchia, 1983). Most of these studies examine the impact of proprietary costs on voluntary disclosure of proprietary information during periods of uncertainty and information asymmetry. Proprietary costs are imposed when managers perceive that some information is private and may be regarded as potentially costly because it may assist a company's competitors (Healy and Palepu, 2001; Verrecchia, 1983). Proprietary costs arise when competitors observe the information available in the market and use it to detriment the disclosing company. Thus, the existence of proprietary costs will lead the manager to not disclose uncertain information if the competitive pressures and proprietary costs associated with such disclosure is significant.

A firm's decision to make a public disclosure can damage its competitive position in the product market (Darrough and Stoughton, 1990; Verrecchia, 1983) because competitors may make strategic use of information disclosed to their advantage (Tsakumis *et al*., 2006; Linsley and Shrives, 2005; Edwards and Smith, 1996). In a discretionary risk disclosure setting, the challenge of a manager is to decide whether to disclose risk information to the market or to withhold it. The existence of proprietary risk disclosure cost however, would create a trade-off between the positive and negative effects of voluntary risk disclosure.

Earlier work by Verrecchia (1983) on the discretionary disclosure model lead to the argument that the decision to disclose or to withhold information depends on the expected size of the proprietary costs involved. He assumed that the cost is constant and independent of the type of the information. Verrecchia (1983) argues that proprietary disclosure costs however will limit managerial incentives to voluntarily disclose information. According to Verrecchia (1983, p.179):

> The manager decides to either release or withhold this signal on the basis of the information's effect on the asset's market price. He exercises discretion by choosing the point, or the degree of the information quality, above which he discloses what he, observes, and below which he withholds his information.

Verrecchia (1983) refers to this point as a 'threshold level of disclosure'. The threshold level of disclosure suggests that managers' decision to withhold information depends on the investors' expectation towards the concealment of that disclosure. In his model Verrecchia (1983) assumes that if the value of information is under the threshold level, the information is considered unfavorable and will be withheld whereas if the value of information is above the threshold level then the information will be disclosed.

Verrecchia (1983) further explains that as the threshold level of disclosure increases, proprietary cost also increases and vice versa. Because of the difficulty of verifying whether information which is withheld and never disclosed is either 'good' or 'bad' news, managers may exercise certain discretion in choosing the timing and extent of disclosure of information, taking into account that no information may be interpreted as bad news. In this case, proprietary costs will be an important element in making this decision. In effect, according to Verrecchia (1983), a proprietary cost introduces noise into the model by extending the range of possible interpretations of withheld information, which is actually favorable. This finding also has been supported by Chow *et al.*'s (1996) laboratory experiment on the relationship between proprietary cost and a threshold level of disclosure.

According to Scott (1994), proprietary costs theory can be divided into two general hypotheses: (1) the probability of a firm disclosing information is negatively associated with the proprietary costs attached to the disclosure, and (2) the probability firm disclosing information is positively associated with the favorableness of the news in the disclosure. In a further test of Verrecchia's (1983) proprietary cost theory, Scott (1994) investigates the incentives and disincentives of voluntary disclosure for defined benefit pension schemes of Canadian firms. His findings support these general hypotheses. His results show that the proprietary costs and the type of news to be disclosed do influence firms' disclosure level. The larger the proprietary cost, the greater is the incentives for firms not to voluntarily disclose information. However, if the news is favourable these firms have greater incentives to disclose the information. In another article, Teoh and Hwang (2001) also explain in their model that firms prefer to withhold information because of high disclosure costs involved when disclosing such information.

On the other hand, disclosure of favourable information could encourage competitors to enter the market while disclosing other information could be used by current competitors to increase their market share. Campbell *et al*. (2001) argue that companies might minimize their disclosure and choose to withhold information which is favourable to the company for some reasons. Campbell *et al.* (2001, p. 84) suggest that:

> …companies might choose to withhold positive information even where no proprietary costs are involved. This is because some companies may wish to differentiate themselves from companies with poor prospects that disclose every piece of positive news.

Disclosure of proprietary information is necessary to increase the financial market valuation of the firm. Proprietary information costs however arise from the negative outcome of proprietary information disclosure. Richardson (2001) contends that the market is rational in the sense that it is able to associate non-disclosure with either low realization of the managers' signal or a firm that committed to no disclosure. He suggests that the rational decision to withhold or disclose information is a function of the capital market benefits from disclosing, the costs from not disclosing and the costs of disclosing information and it is well known by the managers.

Scott (1994) suggests that in the absence of disclosure, proprietary costs prevent investors from fully discounting share price. This is because, investors are uncertain whether information withheld is to avoid the realization of the proprietary costs or the news itself is bad. Scott (1994) suggests that the more favorable the news, the greater incentive to disclose and the more positive influence on share price. On the other hand, the larger the proprietary costs, the greater the incentives not to disclose and the greater the decrease in firm values upon disclosure. Further, investors will react less negatively to withhold information as proprietary cost increase since the motive for non-disclosure becomes more uncertain.

The models of proprietary costs developed by aforementioned studies are when the information is proprietary. When the information is non-proprietary, investors know that usually managers will release it. However, Dye (1985) argues that managers are

also reluctant to disclose such non-proprietary information. He concludes his arguments on the disclosure of non-proprietary information based on three reasons:

> The first one is based on the condition that investors' knowledge of management's information is incomplete, in which case managers may successfully suppress bad information. The second reason follows from the observation that managers possess a vast array of private information, some of which may be proprietary and that non-proprietary information may not be disclosed if it is part of such an array (…). The third reason stems from the existence of a principal-agent problem between shareholders and managers, the best resolution of which requires management's reticence. (Dye, 1985, p. 141)

Penno (1997) examines the voluntary disclosure of non-proprietary information focusing on information quality held by managers. In his examination, he found that the frequency of voluntary disclosures is negatively related to the quality of information. This suggests that the quality of management's private information will not affect managers' voluntary disclosure decisions. His findings however contradict with the findings of Verrecchia (1990) and Jung and Kwong (1988) when the information is proprietary. Previously, Verrecchia (1990) and Jung and Kwong (1988) suggest that voluntary disclosure is greater when the quality of information held by managers is relatively high.

In this study, the impact of proprietary costs will be investigated on the decision of management's voluntary risk disclosure. Proprietary disclosure costs would limit managerial incentives to disclose risks in discretionary disclosure setting. However, disclosure of risk information could have a positive or negative impact on the firm value. Moreover, proprietary costs are imposed on a firm if competitors use the risk information in a manner that harms the firm's prospect (Linsley and Shrives, 2005) even if the information is favourable. This imposition of a proprietary cost will place a company at a competitive disadvantage and will negatively affect the company. In the presence of proprietary costs, the extent of voluntary risk disclosures activity of a firm has to trade-off the positive and negative effects of disclosing such information.

2.4 CORPORATE REPORTING: AN OVERVIEW OF FINANCIAL REPORTING AND DISCLOSURE STANDARDS AND PRACTICES IN MALAYSIA

With globalisation of economies, there is pressure for companies to make adequate and even voluntary disclosure. To increase transparency and high quality information by companies, the Malaysian regulatory and conceptual framework mandates disclosure and dissemination of timely, accurate and material information to investors (Thillainathan, 1999). Malaysia's accounting, auditing, financial reporting and disclosure standards and practices by public listed companies are governed by the Companies Act 1965, Securities Commission, Bursa Malaysia and Financial Reporting Act 1997. These regulatory authorities have leaded the development of new codes and regulations to strengthen corporate governance with the goal to eventually restore investor confidence. One of the key functions of annual reports is to provide information on the company's financial performance, financial position as well as its cash flows. In Malaysia, the Companies Act 1965 requires all registered companies to submit their annual audited financial reports to the Companies Commission of Malaysia which is prepared in accordance with approved accounting standards (Lazar and Choo, 2008). The Companies Act 1965 was the main provider of a form of reporting framework where the Schedule 9 of the Companies Act requires companies to disclose specific information in the financial statements[9]. However, the content and format of financial statements are not covered by the schedule (Lazar and Choo, 2008).

The Securities Commission (SC) requirements focus on public companies. Based on Lazar and Choo (2008, p.2):

> There are three areas address by the SC which includes:
>
> (i) Corporate Disclosure Policy which requires companies to maintain a high level of disclosure;
>
> (ii) Post Listing Obligations which requires companies to submit reports such as annual reports, interim reports and related party transactions; and
>
> (iii) Accounting Standards and Valuation of Assets which addresses the issue of minimum compliance to accounting standards and other statutory requirements.

[9] This was before Malaysia represented on the International Accounting Standards Committee (IASC) in 1979.

Bursa Malaysia and Financial Reporting Act 1997 will be discussed in some length in the coming section, focusing on risk management and internal control disclosure.

2.4.1 BURSA MALAYSIA

Bursa Malaysia requires a public listed company to disclose its financial position, management and operations in order to enable shareholders and investors to assess its performance. There are 16 chapters altogether under the Bursa Malaysia Listing Requirements (BMLR), and the chapter that relates to disclosure standards is Chapter 9 *Continuing Disclosure*. BMLR Paragraph 9.02 (1) states that:

> A listed issuer must, in accordance with these Requirements disclose to the public all material information necessary for informed investing and take reasonable steps to ensure that all who invest in its securities enjoy equal access to such information.

According to Paragraph 9.03 (1) *Disclosure of material information*, public listed companies are required to make immediate public disclosure of any material information. Paragraph 9.03 (2) defines information is considered material, if it is reasonably expected to have a material effect on (a) the price, value or market activity of any of the listed issuer's securities; or (b) the decision of a holder of securities of the listed issuer or an investor in determining his choice of action. With respect to public announcements made by public listed companies, the BMLR Paragraph 9.16 *Content of press or other public announcement* state that the public announcement must be, among others (a) is factual, clear, unambiguous, accurate, succinct and contains sufficient information to enable investors to make informed investment decisions;(b) is not false, misleading and/or deceptive; and (c) is balanced and fair.

As a guidance and assistance to companies in complying with their disclosure obligations under the BMLR, *Best Practices in Corporate Disclosure* has been established by the Bursa Malaysia through its Task Force in July 2004. Although it is purely voluntary, the goal is to:

> ...assist companies to move beyond making minimum disclosures so that they comply not only with the letter but the spirit of the disclosure obligations. On this premise, the

> Best Practices enumerated herein will go further than what is already required by strict laws and regulations. (Best Practices in Corporate Disclosure, p. 4)

With regard to companies' reporting in the annual report, the BMLR in Appendix 9C *Contents of annual report*, paragraph 7 requires a brief description of industry trends and developments in the Chairman's Statement and a discussion and analysis of the group's performance during the year and the material factors (including non-financial information) underlying its results and financial position. The Chairman's Statement should also emphasize trends and identify significant transactions or events during the year under review. These compulsory requirements do not state whether operational, strategic, or commercial risks; they only mention that the company must give information about the future developments, industry trends, material risks and uncertainties facing the company. Therefore, the specific disclosures are vague.

2.4.1.1 Malaysian Corporate Governance Reforms

The annual reports by public listed companies should report the company's financial performance, financial position as well as its cash flows. In addition to that, the annual reports of public listed companies also required to disclose the extent of compliance with the Malaysian Code on Corporate Governance (the Code) which has been approved by the high level Finance Committee of Corporate Governance. In March 2000, the Code has been issued with an amendment to the BMLR (Chapter 15 *Corporate Governance*) in maintaining market integrity and protecting investors' interests and enhancing their confidence to the Malaysian capital market. The Code which describes the best practices for corporate governance principles has come into effect in early 2001. Four parts were set out to describe the Code recommendations: 1) Principles of corporate governance; 2) Best practices in corporate governance; 3) Exhortations to other participants; and 4) Explanatory notes and 'mere best practices'. Bursa Malaysia requires listed companies to comply with Parts 1 and 2 of the Code. Public listed companies are required to include a narrative statement of how they applied the principles set out in Part 1 and also state in their annual reports the level of compliance in their practice with the best practices set out in Part 2 and explanation should be provided in accordance to any non-compliance and/or any alternatives practices adopted.

Additionally, Bursa Malaysia requires public listed companies to make additional statements with regards of their state of internal control. According to the revised BMLR (2007), 'a listed issuer must ensure that its board of directors includes in its annual report a statement about the state of internal control of the listed issuer as a group' (Part E, Para 15.27 (b)). Public listed companies are required to address the *Principle and Best Practices* in the Code which relate to internal control in which the board of a public listed company should 'maintain a sound system of internal control to safeguard shareholders' investment and the company's assets'. In making the internal control statement, public listed companies are guided by the *Statement on Internal Control*[10] *– Guidance for Directors of Public Listed Companies*. This guideline which has been established by the Bursa Malaysia through its Task Force in the year 2000 is to assist public listed companies in making disclosures in their annual reports on the state of internal control in compliance with the BMLR. Moreover, the guideline gives emphasis to the need for proper risk management which is a critical aspect of a sound system of internal control. In making the internal control statement, a public listed firm is required to address issues related to internal controls as recommended by the *Principle and Best Practices* in the Code. This includes that the board of directors should: (i) identify principal risks and ensure the implementation of appropriate system to manage risk, and (ii) review adequacy and the integrity of the firm's internal control systems. Overall, the internal control statement 'requires directors to exercise judgement in reviewing how the company has implemented the requirements of the Code relating to internal control and reporting to shareholders thereon.'

Later, in the 2008 Budget speech, the Prime Minister[11] announced that 'the Code is being reviewed to improve the quality of the board of public listed companies by putting in place the criteria for qualification of directors and strengthening the audit committee, as well as the internal audit function of the public listed companies'. As a

[10] This guidance has been derived from the Turnbull report prepared by the ICAEW (the guidance issued to directors of companies listed on the London Stock Exchange), COSO report, the Basle Committee on Banking Supervision and the International Standards on Auditing (ISA) as adopted by the Malaysian Institute of Accountants (MIA) and the Malaysian Association of Certified Public Accountants (MACPA).

[11] Tun Abdullah bin Haji Ahmad Badawi was in the position at that time who served as a Malaysian Prime Minister from 2003-2009.

result, the Revised Malaysian Code on Corporate Governance 2007 (2007 Code) takes place showing greater clarity of the role of audit committee and internal audit function in dealing with the effectiveness of risk management policies within company. Other than the audit committee, the establishment of other committees such as Risk Management Committee and a Corporate Governance Committee is also recommended by the Code but these committees are not often set up by listed firms (Yatim, 2010).

The objective of the 2007 Code is to further strengthen corporate governance practices in line with developments in the domestic and international capital markets. The 2007 Code has mandated all public listed companies to have internal audit function. It typically evaluates the system of internal control of the whole management process of planning, organizing and directing to determine whether reasonable assurance exists so that objectives and goals of the company will be achieved (Haron *et al.,* 2010). Otherwise, the board should review and briefly explain whether there are other ways of obtaining sufficient assurance of review of the effectiveness of the internal control system within the company. A head of internal audit will be responsible for the regular assessment of the effectiveness of the risk management and internal control within the company. On top of that, to safeguard the independence of the internal audit function, the head should report directly to the audit committee[12]. The 2007 Code has been implemented since 1 October 2007.

2.4.2 FINANCIAL REPORTING ACT 1997

In Malaysia, Financial Reporting Act (FRA) was passed in the year 1997. The FRA has created two independent bodies, namely the Financial Reporting Foundation (FRF) and the Malaysian Accounting Standard Board (MASB). The FRF oversees the operating activities of MASB while MASB is the standard setting body for accounting standards for Malaysia (Lazar and Choo, 2008; Thillainathan, 1999). Under the FRA, all companies listed on the Bursa Malaysia are required to comply with the accounting

[12] Turnbull report (1999) suggests that responsibility for risk management could be delegated to the audit committee and in many organizations internal audit reports directly to the audit committee on risk management.

standards approved by the MASB. Before the FRA came about, from 1979, Malaysia has been adopting, though not all accounting standards issued by the International Accounting Standard Committee (IASC)[13] called *International Accounting Standards* (IASs) (Lazar and Choo, 2008). In the 1980's Malaysia Institute of Accountant (MIA) and Malaysian Institute of Certified Public Accountants (MICPA)[14] issued new standards to meet the local reporting requirements which are known as *Malaysian Accounting Standards* (MASs) (Lazar and Choo, 2008). Since April 2001, the rule of IASC has been taken over by the International Accounting Standard Board (IASB) which issued accounting standards under the new label of '*International Financial Reporting Standards* (IFRSs)' (Ball, 2006). The purpose of IFRS is to be a set of financial reporting rules that can be applied equally by public companies worldwide (Ball, 2006). The IASs and IFRSs rules are generally equivalent and most of MASs is based on the relevant IASs or IFRSs. In 2005, MASB has renamed the MASB standards to FRS to achieve the stated goal of 'harmonization' of accounting rules worldwide (Othman and Ameer, 2009). The FRF and MASB announced on 1 August 2008 their plan to bring Malaysia to IFRS full convergence by 1 January 2012[15].

2.4.2.1 Accounting Standards Related to Risk Disclosure

Table 2.1 provides examples of approved financial reporting standard compliance with IFRS that tackled risk disclosure by companies. The Malaysian accounting standards presented in Table 2.1 represent the Malaysian risk-relevant reporting standards that Malaysian companies should comply. Malaysian listed companies are required to adopt the FRS issued by MASB from 2006 onwards. It means that there are implications for risk disclosure published in the annual reports which will reflect the year under study (i.e. 2009).

Accounting standards have been developed in response to the increasing needs of users for relevant risk information. For example, FRS132 *Financial Instruments – Presentation and Disclosure* (IAS32) exposes the type of market risk being faced by

[13] The International Accounting Standards Committee (IASC) is a body established in 1973 by the professional accountancy bodies in the UK, US, Australia, Canada, France, Germany, Japan, Mexico, Netherlands and Ireland (Ball, 2006).

[14] MICPA is formerly known as MACPA (Malaysian Association of Certified Public Accountants).

[15] Source: http://www.masb.org.my Retrieved on 21 February 2011.

listed companies in Malaysia. The standard prescribes that the disclosure may include a combination of narrative descriptions and quantified data, as appropriate to the characteristic of the instruments and their relative significance to a company.

However, an important note is that the status of current regulation of risk reporting pursues a piecemeal approach[16] instead of a comprehensive approach. It is argued that to have rules and regulations for disclosure of other types of risk is crucial since current accounting rules only engage in financial risk especially associated with the use of derivatives (Cabedo and Tirado, 2004; Beretta and Bozzolan, 2004). Therefore, there appears to be a progress towards reasonable rules of a more comprehensive risk reporting (Cabedo and Tirado, 2004). While reporting of most financial risk types in Malaysia is mandatory disclosure, other types of risk, which this study will examine more closely, are only voluntarily disclosed by companies.

[16]Accounting rules target specific risk categories only not the comprehensive risk reporting (Cabedo and Tirado, 2004).

Table 2.1:

Financial Reporting Standards Relating to Risk Disclosure[17]

Malaysian standard / Relevant (IFRS/IAS)	**Title**	**Effective date**	**Purpose**
FRS 132[18] (IAS 32)	*Financial Instruments: Presentation And Disclosure*	1 /1/2006	FRS 132 helps to enhance understanding of the significance of financial instruments to the entity's financial position, performance and cash flow. The disclosures should provide information to assist users of financial statements in assessing the extent of risk related to financial instruments.
FRS 139 (IAS 39)	*Financial Instruments: Recognition And Measurement*	1 /1/2010	All disclosure requirements are covered in FRS 132.
FRS 7 (IFRS 7)	*Financial Instruments: Disclosure*	1 /1/2010	FRS 7 replaces the disclosures that were required in FRS 132. This include: (a) information about the significance of financial instruments, (b) information about the nature and extent of risk arising from financial instruments, (c) disclosing risk through the eyes of the management, (d) expanded quantitative disclosure of risk, (e) sensitivity analysis and (f) enhanced disclosure of an entity's financial position and performance.

[17] Source: http://www.masb.org.my Retrieved on 21 February 2011.

[18] On 1 January 2010, FRS 132 has renamed as FRS 132 *Financial instruments: Presentation* after the introduction of FRS 7 *Financial instrument: Disclosure.*

2.5 CORPORATE RISK DISCLOSURE

2.5.1 Corporate Risk and Risk Disclosure Definitions

The definition of risk is the basis concern when conducting risk reporting disclosure study by corporations. In the past, the word 'risk' has been used to reflect adverse events that have occurred which cause unexpected or unintended outcomes. In pre-modern society, adverse events such as natural events were more likely to be viewed as an 'act of God'. This concept of risk is therefore solely considered to be bad and beyond the influence of human intervention. Lupton (1999, p. 5) points that:

> Risk was perceived to be a natural event such as storm, flood or epidemic rather than a human-made one. As such, humans could do little but attempt to estimate roughly the likelihood of such events happening and take steps to reduce their impact.

Additionally, Lupton (1999) argues that the idea of 'risk' has changed over the centuries. This is following the industrial revolution which influenced largely by the emergence of the insurance industry, the development of probability calculations and with the influence of human intervention. As the nature of risk keeps on changing, she argues that as a result the notion of risk extends. According to Lupton (1999, p. 6):

> During the eighteenth century, the concept of risk had begun to be scientized, drawing upon new ideas in mathematics relating to probability...By the nineteenth century, the notion of risk was no longer located exclusively in nature, but was also in human beings, in their conduct, in their liberty, in the relations between them, in the fact of their association, in society (…).

The magnitude of risk itself can lead to broader definitions. In modern businesses, the concept of risk management can be recognised as both 'good' and 'bad' aspects of risk which relates to the uncertainty of future outcomes (Lupton, 1999). Several researchers (Dobler, 2008; Schrand and Elliott, 1998) argue that risk refers to 'uncertainty' is no longer limited to one-sided definition such as the exposure to financial loss, whereas they claim that uncertainty refers to two-sided definition which clearly linked to opportunity or upside risk. As a result, different definitions have arisen in the literature. A well-cited definition of risk suggested by professional reports (e.g., ICAEW 1997) is:

> ...uncertainty as to the amount of benefits. The term includes both potential for gain and exposure to loss. (FRS 5, Reporting the substance of transactions, ASB 1994)

In this definition, the full range of uncertainties that may affect the company's future prospects is considered including both upside and downside risks, uncertainty risk and volatility risk and this definition is already being used in previous risk disclosure literature (e.g., Linsley and Shrives, 2005). Crouhy *et al.* (2006, p. 25) define risk as 'the volatility of returns leading to unexpected losses, with higher volatility indicating higher risk'.

In finance, risk means 'statistical uncertainty arising from the variability of a known population of returns' (Coleman, 2006, p. 22). A company's performance has only two dimensions which are risk and return. In this context, risk as uncertainty refers to the distribution of all possible outcomes, both positive and negative. The company's risk profile is full of uncertainty about its future cash flows because it relates to the future. From a portfolio perspective, some of the risks come from the external environment are systematic (i.e. non-diversifiable), while others are non-systematic and diversifiable by measures of risk management.

According to the International Federation of Accountants (IFAC, 1999), risk is also connected to business and economic performance; therefore risk can be understood within the broader context of a company strategy. The setting up of a business begins with deciding the corporate mission and vision (such as the expression of risk appetite) and later making decisions on a business strategy. Hence, the corporate objectives to achieve this on every opportunity are identified and pursued. As such, IFAC defines risk as:

> …uncertain future events which could influence the achievement of the organisation's strategic, operational and financial objectives. The dimensions of risk also include the impact on an organization's reputation, even 'loss of legitimacy' from activities deemed unacceptable to the community. (IFAC, 1999, p. 6)

The key to truly have a successful risk management is the main challenge for companies. To achieve this, managers should have the ability to identify, evaluate and

manage risks and ensure that risk information is effective. Even though there is no single brilliantly designed risk management system, it is important for managers to take action and prevent risks whenever or wherever they arise (Carrel, 2010). This is one of the ways to ensure successful recognition and accelerate innovation to create companies' survival and long-term value (such as high-performing and insightful companies). Risk information, therefore, is defined as risk-related information on uncertainty of future outcomes (Dobler, 2008). Businesses' activities entail a variety of risks driven by various external and internal sources of risk (risk factors). Generally, these sources comprise, for example, political, economic, market, finance, regulations, business process and personnel. According to Carrell (2010, p. 17):

> Two types of factors typically expose a firm to risks: the specific factors that derive from its very existence, history, culture and main customers, and the systematic risk factors associated with the sector, country or economic environment the firm operates within. Although less commonly highlighted, a third type of risk factors – systemic – have in recent months been a major source of concern. While systemic risks won't be directly manageable by a firm individually, their fast evolution and potentially devastating impact requires special attention.

Although there is boundless diversity of the sources of risk, the way to deal with it in an organization are closely connected with business strategy and have a potential effect on the entity's performance (Carrell, 2010).

Risk reporting would demonstrate that the board of directors understand, consider and manage risk well (Dobler, 2008). It is important to inform shareholders the effect of risk on company's future financial position. Since capital is provided by shareholders for companies to deliver a return, shareholders are expecting managers to be accountable and responsible towards them.[19] In this so-called manager-shareholder relationship, a manager has to act in the shareholders' best interest and to assure shareholders that risk management strategies are adequately permitted. Managers' may make more sense to manage uncertainties by showing their capabilities and accountability to transparently communicate risk profile and strategies to the external investors.

[19] According to Carrell (2010, p.1), 'The Chief Executive Officer is the guardian of that bond between the shareholders and the board of executive directors.'

In an attempt to define risk disclosure in this study, previous literatures on risk disclosure are sought. From the review, not all previous researchers individually define the meaning of risk disclosure. This is because there is difficulty in identifying the meaning of risk disclosure since no single definition has been adopted by previous researchers. However, some of the definitions used in the previous literatures depend on the feature and focus of the study itself. Dobler *et al.* (2011) argue that risk disclosure covers a broad set of information on risk sources and means of risk management varying in location, scope and nature.

A study by Beretta and Bozzolan (2004, p. 269) define risk disclosure as:

> ...the communication of information concerning firms' strategies, characteristics, operations, and other external factors that have the potential to affect expected results.

Linsley and Shrives (2006) incline to relate risk in accordance to Lupton's (1999) discussions of how risk is most widely understood. The definition of risk disclosure in their study is:

> if the reader is informed of any opportunity or prospect, or of any hazard, danger, harm, threat or exposure, that has already impacted upon the company or may impact upon the company in the future or of the management of any such opportunity, prospect, hazard, harm, threat or exposure. (Linsley and Shrives, 2006, p. 389)

Both of the definitions focus on the sources of uncertainties, however, the definition by Linsley and Shrives (2006) is more expansive in which they include the concept of a company's upside and downside risks together with the elements of a company's past and future economic and financial situations. Therefore this definition will be used in this thesis.

2.5.2 Corporate Risk Classification

In the above section, risk is referred to as uncertainty associated with both a potential gain and potential loss. In other words, it refers to the volatility of future earnings or cash flows. Therefore, when examining risk disclosure, negative and positive outcomes

(potential losses and opportunities) are to be considered (Linsley and Shrives, 2005, Lajili and Zegal, 2005). The increased attention on the current state of risk disclosure is also driven by the increasing relevance of some types of risks and uncertainties, especially in the process of making investment decision. Therefore, a clear identification of the different sources of uncertainty becomes necessary. In a business context, risks arise from various internal and external factors or sources.

Businesses in different industries are facing different risks; therefore, it is difficult to establish a set of risk types that is commonly faced by corporations. One example of a more detailed listing of the specific risks by an organisation is highlighted in the ICAEW (1997) proposal which has been utilised by some of the prior studies (e.g., Linsley and Shrives, 2006, 2005). For instance, Linsley and Shrives (2006) classified risk disclosure categories into six categories: financial, operational, empowerment, information processing and technology, integrity, and strategy, which further divided into 37 sub-categories based on ICAEW (1997). Table 2.2 displays different examples of risk categorization.

As noted in the aforementioned examples (Table 2.2), there are different perceptions of scope of the concept of risk, and risk disclosure categorizations are not uniform. Further, there is no right classification model of risk and almost all categorizations are based on whether it is financial risk or non-financial risk. Additionally, companies use different terminology when they refer to risk (Combes-Thuelin *et al*., 2006). According to Crouhy *et al*. (2006, p.14), categorization of risk is important so that 'ill-defined risk measurable, manageable, and transferable'. Knowing different categories of risk information also helps to improve the knowledge of investors to detail a company's assets as well as its financial position and risks (Cabedo and Tirado, 2004). In the Malaysian context, Amran *et al.* (2009) has adopted the risk disclosure categorization based on Linsley and Shrives's (2006) study. For the purpose of this thesis, a new classification of categories is developed to reflect local shareholders' exposure to risk information in Malaysia. These categories have been synthesized from previous literature in the area, dividing risk disclosures into the following four categories:

1. Operational risk
2. Environmental risk

3. Financial risk
4. Strategic risk

1. Operational risk

In a broad definition, operational risk is the risk of direct and indirect losses resulting from inadequate or failed internal processes, personnel or systems errors or from external factors (Cabedo and Tirado, 2004). Specifically, operational risk can be defined as a risk of opportunity cost or an economic loss due to inadequate procedures and policies, system failure, human error, lack of basic internal control, liquidity problem, health and safety problem, non-compliance with the regulatory requirements, management failure, unauthorised activities and frauds. Operational risk is also the risk of potential loss due to failures or inadequacies of internal operating procedures resulting in inefficiency, reduction in productivity and increase in operating cost, risk of losses due to procedural errors and failures in internal control that impacts the delivery of the group's products and services.

2. Environmental risk

Environmental risk arises from the macroeconomic events that are factors essentially beyond the organisation’s control and comprises disclosures relating economic risk such as general economic condition and global financial crisis, weather condition, political risk, legal and regulation risk, and industry sources (suppliers and customers).

3. Financial risk

Financial risk refers to interest rate risk, foreign currency exchange rate risk, price and commodity risk, credit risk, market risk as well as cash flow and liquidity risk. Apart from these areas, financial risk disclosure includes financial risk management objectives and policies.

- *Interest rate risk* is the risk of loss through mismatching the interest bases of assets and liabilities. Interest rate risk includes exposure to interest rate risk and borrowings, risk on interest rate profile and swap.

Table 2.2:

Examples of Risk Classifications

Author(s) (Year)	Risk Categories
ICAEW (1997)	Reproduced the Business Risk Model developed by Arthur Andersen, one of the professional accountancy firms. In the model, risk is grouped according to its causal factors, either internal or external factors. Three main components: environmental risk, process risk; and information for decision-making risk. Under environment risk, the risk factors are competitor, catastrophic loss, sensitivity, sovereign/political, shareholder relations, legal, regulatory, industry, capital availability and financial markets. Under process risk, the risk factors are divided into five main groups: operation risk, empowerment risk, information processing/technology risk and financial risk. Under information for decision making risk, the risk factors are divided into three main components: operational, financial and strategic.
IFAC (1999)	Risk arises from three different levels: Level 1 refers to systematic risk including political, economic and social risks over which an organisation has little control; Level 2 risks arise from factors that organisations cannot control but can influence including competitive, reputation and regulatory risk; and, Level 3 varies with each industry but an organisation can have a great deal of influence over it (e.g., financial and people risks).
IRM (2002)	Risk arises from external and internal factors. The IRM further categorises risk into different types include strategic, financial, operational and hazard.
Beretta and Bozzolan (2004)	Risk classified into three risk factors: (i) company strategy (organization objectives, mission, goals for performance), (ii) company characteristics (financial structure, corporate structure, technological structure, organization and business process) and (iii) the environment surrounding the company (regulation and legislation, political, social and economic factors).
Cabedo and Tirado (2004)	Risk classified into two groups: non-financial (business and strategic) and financial (market, credit, liquidity, operational and legal).
Lajili and Zegal (2005)	Risk grouped into eleven components: financial, political, technology, environmental, weather, government regulations, seasonality risk, operational, cyclicality, suppliers and natural resources.
Abraham and Cox (2007)	Risk disaggregated into three components: business, financial and internal control that corresponds to the three classes of risk-reporting guidance in the UK.
Deumes (2008)	Risk grouped into eight components: macro environmental sources, industry sources, internal sources, other sources, loss and probability of loss, variance, lack of information and lack of control.

- *Foreign currency exchange rate risk* is the risk of loss as a result of an unfavourable movement in exchange rates. Foreign currency exchange rate risk includes exposure of foreign currency exchange rate risk, risk of foreign currency transaction and translation as well as forward foreign exchange contract.
- *Price and commodity risk* is the risk resulting from the price volatility and adverse price movements in the market.
- *Credit risk* is the risk that a borrower or creditor will not able to meet its obligations (non-performance creditors). Credit risk includes credit risk concentrations, customer credit history, credit risk limit, and credit risk exposure.
- *Market risk* is the risk of loss resulting from changes in the market value of negotiable instruments.
- *Cash flow and liquidity risk* is the risk of loss resulting from the inability to meet financial obligations as they arise, due to a lack of liquid resources.

4. Strategic risk

Strategic risk is primarily a risk caused by events that are external to the company, but have a significant impact on its strategic decisions or activities. Strategic risk is often a risk that an organisation may have to take in order to expand as well as for the long-term continuity (which is ability to survive) and sustainability of the organisation which affects the overall direction of business.

2.5.3 Risk-Related Disclosure: Review of Previous Literature

The research on corporate financial disclosure (Buzby, 1975; Firth, 1979; McNally *et al.*, 1982; Raffournier, 1995; Oliveira *et al*., 2006; Aljifri, 2008) has grown dramatically in the last decades. To date, there have been numerous studies on financial risk management and disclosure. In the US setting, the issuance of *Financial Reporting Release* No.48 (FRR48) by the SEC has established compulsory requirements for disclosure on derivatives and market risks. These compulsory market disclosures according to FRR48 have attracted many previous researchers to review and determine the benefits of such disclosures to investors (e.g., Jorgensen and Kirschenheiter, 2003; Linsmeier *et al.*, 2002; Roulstone, 1999; Rajgopal, 1999). In the Malaysian context, following the issuance of FRS132 *Financial Instruments: Disclosure and Presentation*,

studies have been focusing on the market risk disclosure practices by Malaysian firms especially after 2006 (Othman and Ameer, 2009). Other studies in financial instruments has also been focused in the rest of the world such as (to name a few) Portugal (Lopes and Rodrigues, 2007) and Jordan (Al-Yaseen and Al-Khadash, 2011).

There are also studies that focused on derivative-related information disclosure (e.g. Afza and Alam, 2011; Li and Gao, 2007; Dunne *et al*., 2007; Chalmers and Godfrey, 2004; Seow and Tam, 2002). The studies reveal that these disclosures would be useful for investors to broaden their knowledge of the company derivative exposures as well as assets and risk situations. For example, foreign exchange derivatives are used to enhance shareholder's wealth by reducing firm's foreign exchange exposure (Afza and Alam, 2011). Previous studies also reveal evidence consistent with an impact of risk disclosure on capital markets. However, the distinct impact depends on the reporting format chosen (Dobler, 2008).

The increase on corporate risk disclosure is revealed in a number of academic studies that have emerged to date. Some of these studies have responded to this issue by providing an analysis of a wide-ranging corporate risk disclosure and focusing on developing a framework for assessing risk disclosure (e.g. Solomon *et al.*, 2000; Cabedo and Tirado, 2004; Beretta and Bozzolan, 2004; Combes-Thuelin *et al.*, 2006) and examining the merit and demerit of risk disclosure itself (e.g., Linsley and Shrives, 2000). In addition, some other studies examining the relationship between risk disclosure and its potential determinants such as company-specific factors, corporate governance mechanisms and ownership structures (e.g., Abraham and Cox, 2007; Linsley and Shrives, 2006, 2005; Lajili and Zhegal, 2005). Table 2.3 provides a synthesis of the contributions of a sample of academic studies.

Table 2.3:

Review of Academic Studies on Comprehensive Risk Disclosure

Author (s)	Method	Sample	Objectives and Focus	Findings (Main Results)
Solomon *et al*. (2000)	Questionnaire survey.	552 UK institutional investors.	To ascertain the attitudes of UK institutional investors towards risk disclosure and to assess whether they consider the current level of risk that is disclosed to be adequate.	UK institutional investors do not generally favour a regulated environment for corporate risk disclosure or a general statement of business risk. There is a need to provide more detailed risk disclosures rather than a generalized statement of business risk management policy.
Linsley and Shrives (2000)	Proposals.		Examine the merit and demerit of voluntary risk disclosure.	Few companies would disclose risk disclosure voluntarily and argued the need to mandatory requirements.
Beretta and Bozzolan (2004)	Content analysis of MDA section only (disclosure index); regressions.	85 annual reports of Italian listed firms for 2001.	Propose a framework for analysis of risk communication and applied it on a sample of quoted Italian firms.	The index of disclosure quality is not influenced either by size or industry but regarding the quantity of risk disclosure, there is a positive relationship with firm size, but no relationship with industry. The voluntary risk reporting is mainly

Table 2.3:

Review of Academic Studies on Comprehensive Risk Disclosure

Author (s)	Method	Sample	Objectives and Focus	Findings (Main Results)
				qualitative and inclined to past and present risks.
Lajili and Zhegal (2005)	Content analysis of the whole annual reports.	300 annual reports of Canadian companies for 1999.	Examine risk disclosures in Canadian companies' annual reports and describe and analyse the subject matter of risk information.	Financial risk is the most frequently disclosed risk. A high degree of risk disclosure intensity reflecting both mandatory and voluntary risk management disclosures was observed. However, no relationship is found between the quantity of compulsory and voluntary risk reporting and firm size, profit, b, or leverage. There appears to be lack of uniformity, clarity and quantification in the information disclosed, hence, potentially limiting their usefulness. They conclude that more formalized and comprehensive risk disclosures might be desirable in the future to effectively reduce information

Table 2.3:

Review of Academic Studies on Comprehensive Risk Disclosure

Author (s)	Method	Sample	Objectives and Focus	Findings (Main Results)
				asymmetries between management and stakeholders.
Linsley and Shrives (2005)	Content analysis (sentence-based approach).	79 non-financial UK companies for 2001.	Examine risk disclosure practices in UK public companies.	Financial risk is the most frequent type of disclosure followed by strategic risk and integrity risk. Most of risk disclosures are qualitative in nature. However, companies provide an incomplete picture on the risk that they are facing.
Linsley and Shrives (2006)	Content analysis of narrative sections in annual report (Disclosure index); Regression.	79 UK companies' annual reports.	Examine risk disclosure practices within UK companies and the relationship between level of risk and company size and the total risk disclosure.	A significant positive association between the number of risk disclosure and company size as well as the level of environmental risk but none is found between narrative risk reporting and measures of financial risk, including gearing, asset cover, b, and price to book value. However, the information disclosed was found to be incomplete and less detailed with limited

Table 2.3:

Review of Academic Studies on Comprehensive Risk Disclosure

Author (s)	Method	Sample	Objectives and Focus	Findings (Main Results)
				disclosure found on risk related to intellectual capital and reputation risks. The results showed that companies' directors are willing to disclose forward-looking risk information disclosure.
Combes-Thuelin *et al.* (2006)	Qualitative methodology based on Huberman and Miles in order to explore the collected data (annual reports of companies, laws, accounting standards, professional sources).	French listed companies.	Facilitating the development of a framework in order to qualify risk. They used the "grounded theory" from Glaser and Strauss (1967).	Establish an inventory of rules currently existing in order to identify the risk disclosure context faced by French companies. There is no consensus between the different pieces of legislation. It is demonstrated that the terminology referred to by companies tends to differ from one to another.
Abraham and Cox (2007)	Content analysis of narrative section.	Largest UK companies for year	Investigate the relationship between risk disclosure practices	The results showed a negative relationship between corporate ownership by long-term institutions and a positive relationship

Table 2.3:

Review of Academic Studies on Comprehensive Risk Disclosure

Author (s)	Method	Sample	Objectives and Focus	Findings (Main Results)
		2002.	within UK annual reports and institutional ownership, board of directors and US dual-listing characteristics.	between corporate ownership by short-term institutions and risk disclosure respectively. Correspond to the business risk, financial risk and internal control risk; they established that the pattern of risk information in the UK annual reports may be dependent upon the form that reporting regulation takes.
Dobler (2008)	Analytically-based framework.		Focuses on reviewing discretionary disclosure and cheap talk models to analyze risk reporting incentives and their relation to regulation.	The results suggest that the informativeness of risk reporting should not be overestimated even in a regulated environment.
Deumes (2008)	Content analysis.	90 prospectuses of Dutch companies on the Amsterdam	Examine whether companies report risk-relevant information to	The results reveal that a measure of risk extracted from the risk sections in prospectuses successfully predict the

Table 2.3:

Review of Academic Studies on Comprehensive Risk Disclosure

Author (s)	Method	Sample	Objectives and Focus	Findings (Main Results)
		Stock Exchange in the late 1990s.	prospective investors.	volatility of companies' future stock prices, the sensitivity of future stock prices to market wide fluctuation, as well as severe declines in future stock prices.
Amran *et al.* (2009)	Content analysis of non-financial or narrative sections in annual reports.	100 Malaysian Public Listed Companies for 2005 (70 companies from Main Board; 30 companies from Second Board).	Look at the availability of risk disclosures in the Malaysian companies' annual reports.	The research findings discovered that the risks being disclosed by the companies are strategic risk and empowerment risk accordingly. By taking Linsley and Shrives's (2006) paper as a comparison, they found that the total narratives discussing risk information in Malaysian companies are not as much as of the UK companies. The extent of risk disclosure was also found to be inclined by the industry environment. As seen within this study, infrastructure and technology industries influenced the companies to

Table 2.3:

Review of Academic Studies on Comprehensive Risk Disclosure

Author (s)	Method	Sample	Objectives and Focus	Findings (Main Results)
				disclose more risk information.
Hassan (2009)	Content analysis (risk disclosure index); Regressions	41 annual reports of UAE companies for 2005.	Examine the relationship between corporations-specific characteristics, namely, size, level of risk, industry type and reserves with the level of corporate risk disclosure.	By relying on the positive accounting theory and institutional theory, the results showed that corporate industry type are significantly related with the level of corporate risk disclosure. This result is consistent with Amran *et al* (2009). Finally, in contrast with reserves-corporate risk disclosure hypothesized relationship, corporate reserve is insignificant and negatively associated with level of corporate risk disclosure.
Hill and Short (2009)	Content analysis (risk factor); Regressions (logit analysis).	Over 400 IPO companies for 1991 to 2003.	(i) Compare the risk disclosures of IPO companies with those of listed companies (reported in extent	(i) Risk disclosures of IPO companies contain a greater proportion of forward-looking information but a lower proportion of information on internal controls and risk management than the disclosures of listed

Table 2.3:

Review of Academic Studies on Comprehensive Risk Disclosure

Author (s)	Method	Sample	Objectives and Focus	Findings (Main Results)
			research).	companies.
			(ii) Examine the extent of any changes in disclosure practices across time.	(ii)Risk disclosure has increased across time
			(iii) Analyse the factors that drive the voluntary disclosure of risk by IPO companies.	(iii) Larger directors' shareholdings are associated with a reduction in risk disclosure.
Oliveira *et al.* (2011)	Content analysis.	81 Portuguese companies (42 listed and 39 unlisted) in non-finance sector annual reports for 2005.	Assess the risk-related disclosure (RRD) practices in non-finance sector Portuguese companies.	Implementation of IAS/IFRS and the European Union's Modernisation Directive in 2005 did not affect the quantity and quality of RRD positively. Disclosures are generic, qualitative and backward-looking. Public visibility (as assessed by size and environmental sensitivity) is a crucial influence in explaining RRD: companies

Table 2.3:

Review of Academic Studies on Comprehensive Risk Disclosure

Author (s)	Method	Sample	Objectives and Focus	Findings (Main Results)
				appear to manage their reputation through disclosure of risk-related information. Agency costs associated with leverage are important influences also.
Ismail and Abdul Rahman (2011)	Content analysis (disclosure checklist).	124 Malaysian public listed companies' annual reports for 2006 to 2008.	Examine the potential effects of institutional investors' and board's monitoring role on risk management disclosure. Focus on the total risk management which includes mandatory and voluntary disclosures.	Risk management disclosure level in Malaysia is relatively low denoting that there is room for improvement. The institutional investors (sensitive and insensitive) play a more effective role in monitoring the company's risk management disclosure compared to the board of directors. The directors' education is the only attribute associated with risk management disclosure.
Dobler *et al.* (2011)	Content analysis (detailed).	160 annual reports of US, Canada, UK and German banks.	Analyse the attributes and the quantity of risk disclosure and its	A consistent pattern where risk disclosure is most prevalent in management reports, concentrates on financial risk categories,

Table 2.3:

Review of Academic Studies on Comprehensive Risk Disclosure

Author (s)	Method	Sample	Objectives and Focus	Findings (Main Results)
			association with the level of firm risk in the US, Canadian, UK, and German settings.	and comprises little quantitative and forward-looking disclosure across sample countries. In terms of risk disclosure quantity, US firms generally dominate, followed by German firms. Cross-country variation in risk disclosure attributes can only partly be linked to domestic disclosure regulation, suggesting that risk disclosure incentives play an important role. While risk disclosure quantity appears to be positively associated with proxies of firm risk in the North American settings, there is negative association with leverage for Germany. This coincides with a "concealing motive" implied by an insider role of banks in German financial setting.

Table 2.3:

Review of Academic Studies on Comprehensive Risk Disclosure

Author (s)	Method	Sample	Objectives and Focus	Findings (Main Results)
Elzahar and Hussainey (2012)	Content analysis (manual).	72 interim reports of UK non-financial companies.	Examine the determinants of narrative risk information in the interim reports.	Risk information in the interim reports (narrative sections) is more likely to be disclosed by large firms. There is also a positive association between industry activity types with levels of narrative risk disclosure. Furthermore, there is an insignificant impact of other firm-specific characteristics (liquidity, gearing, profitability, and cross-listing) and corporate governance mechanisms on narrative risk disclosure. They suggest that in a way to keep investors satisfied, companies that are not performing well (with high levels of financing and liquidity risks) are encouraged to look at investors' demands for risk disclosure.

The studies selected for the annotated review in Table 2.3 are limited solely to those relating to comprehensive risk disclosures. The review of other corporate reporting disclosure (e.g., environmental disclosure, corporate social responsibility disclosure and intellectual capital disclosure) is beyond the scope of this study, and is, therefore, excluded in an attempt to keep the review of previous research studies within a controllable scope. Some of the academic articles displayed in Table 2.3 above are discussed in the following sub-sections.

2.5.4 The Relevance of Risk Disclosure in the Company Annual Report

Corporate risk disclosures are relevance in the business world nowadays especially after the global financial crisis around the globe. Risk disclosure would be useful for investors when making informed decisions as it reduces uncertainty and reduces information asymmetries by raising confidence in the market. The communication of risk management and internal control can provide investors with information to validate management's effectiveness in dealing with increased business and market uncertainty. As part of good corporate governance, the identification and prioritisation of sources of risks and the assessment of the potential impacts of the risk (risk exposure) is expected to be increasingly sought by investors. The increased focus and consideration applied by governments, regulators and accounting institutions around the world have resulted in a surge in corporate risk disclosure recently. The mounting demand from the public on the risk disclosure of corporate information also encourages positive feedback for firms to increase their corporate risk disclosure in annual report.

A number of well-structured approaches to risk management have been developed over the recent years to facilitate managers to administer different type of risks (Linsley and Shrives, 2000). Deumes (2008, p.122) addressed this potential corporate risk disclosure stating confidently that, 'studying risk disclosure is important because corporate transparency about risk is vital for the well functioning of capital markets.'

In examining the risk disclosure in annual reports, the role of corporate risk disclosure has been associated with the significant association with company-specific factors (e.g., Linsley and Shrives, 2006), industry-specific factors (e.g., Hassan, 2009) and ownership structures (e.g., Abraham and Cox, 2007). Linsley and Shrives (2006) also

suggest that companies' directors are willing to disclose forward-looking risk information disclosures, however, the information disclosed was found to be incomplete and less detailed with limited disclosure found on risk related to intellectual capital and reputation risks. Abraham and Cox (2007) reveal that the pattern of risk information in the UK annual reports depends on its reporting regulation. Lajili and Zeghal (2005) find that voluntary risk disclosures in the Canadian annual reports are almost completely qualitative in nature and lack of depth and specificity.

The above review reveals that previous studies that take a broad perspective of risk disclosure are still lacking in transparency about corporate risk information. This is due mainly to the absence of standards and uniform measures for different risk components. This in turn, could limit the enhancement of the overall understanding of risk disclosure studies in a complete sense. While some studies have investigated risk disclosure, the focus of these studies varies considerably. The empirical literature that has examined risk under its comprehensive perspectives is still limited (Beretta and Bozzolan, 2004). Therefore, with the aim of contributing to the literature on risk disclosure, this research examines different types of risk in the annual reports of an emerging economy, Malaysia.

The year of the present study lends to its importance as it reflects the global financial crisis of 2007-2009 which reinforces the importance of the financial risk reporting. Moreover, it will be interesting to consider how risk disclosures may have been enhanced over the past period in response to the corporate governance reforms in Malaysia which includes the importance of risk management and internal control system by companies. It is expected that this study will shed further light on the impact of the global economic uncertainty which reinforced the importance of the Malaysian Code on Corporate Governance and Financial Reporting Standard on the extent of risk disclosure by Malaysian companies. This study also has its advantage as it offers investors an objective assessment of the current reporting practices. This research is therefore expecting to find evidence that companies are responding to the current financial reporting practices and the corporate governance framework in relation to the global financial crisis by enhancing the amount of risk disclosures in the year 2009.

The theory and evidence reviewed so far suggest the following hypothesis:

H_{01}: There is a significant difference in the extent of risk disclosure, in its different classifications, reported in annual reports of Malaysian listed companies for the year 2009.

2.6 UPPER ECHELONS THEORY, MANAGER-SPECIFIC FACTORS, RISK TAKING PROPENSITY AND CORPORATE DISCLOSURE

In this section, two areas of the literature that are relevant to the study are reviewed. Section 2.6.1 focuses on upper echelons theory in general and Section 2.6.2 focuses on manager-specific characteristics based on upper echelons theory, namely, age, functional track, education, tenure and ethnicity and their relations with risk taking propensity and, consequently, the tendency to make information disclosure.

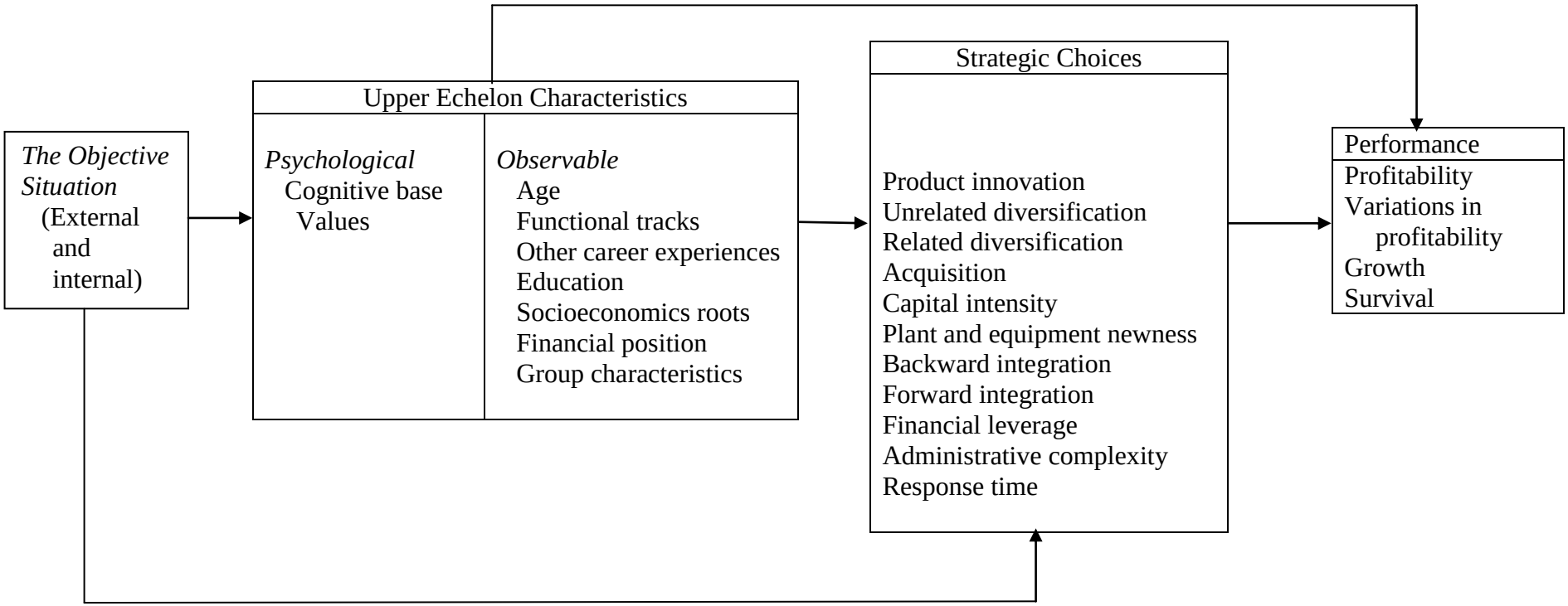
2.6.1 Upper Echelons Theory

A theoretical perspective that was developed to address influences of top managements in corporations is that of the upper echelons theory. The basic concept of upper echelons theory which builds on the premises of earlier strategic choice literature (e.g., Child, 1972; Montanari, 1978) was first introduced in the strategic management literature by Hambrick and Mason (1984) in the context of top managers' reflections in their organizations. According to Hambrick and Mason (1984) upper echelons theory is attributed to top managers' bounded rationality (March and Simon, 1993; 1958) in which their choices are bounded and influenced by their idiosyncratic experiences and values. The central premise of upper echelons theory in which mainly built on the literature is that executive's experiences, values and personalities as well as cognitive processes to a great extent influence their interpretations of the situations they face and, sequentially affect their judgment and decision making.

In their seminal article, Hambrick and Mason (1984) have developed a conceptual model to portray upper echelons perspective in which top executives play a crucial role in shaping major organizational outcomes (Figure 2.1). This model suggests that the manager's preferences on behalf of the organisations, to some extent, reflect the characteristics (psychological cognitive bases, values and observable background characteristics) of these managers. This distinctive of cognitive styles and values of top

Figure 2.1:

An Upper Echelons Perspective of Organizations



Sources: Adapted from Hambrick and Mason (1984)

managers reflect variation as different individual has different way of managing problems. Hambrick and Mason (1984) further argue that such perceptible characteristics can in turn to some extent lead to a different firm's strategy outcomes. Hambrick and Mason (1984, p. 193) emphasize that '…organizational outcomes both strategies and effectiveness are viewed as reflections of the values and cognitive bases of powerful actors in the organization.'

Thus it can be argued that, when confronted with the same situations that are complex, uncertain and involve high levels of ambiguity; different managers, will make different decisions based on their cognitive characteristics and values such as risk attitudes and confidence. Therefore, the idea that managerial characteristics could have an impact on corporate decisions on disclosure could be apparent.

Hambrick and Mason (1984) originally introduce two main ideas. Firstly, is the idea to link the 'unit of analysis' and strategic choices. This 'unit of analysis' involves the characteristics of either the individual top executive (i.e., CEO) or a group of a top management team. However, Hambrick and Mason (1984) argue that firm strategies reflect the characteristics of its powerful actors, among whom the CEO is prominent. Ever since, many upper echelons studies have focused almost wholly on the importance of top managers, especially CEOs (Malmendier and Tate 2005; Rajagopalan and Spreitzer, 1997). In addition, the CEO has been characterized as a firm's chief cognisor and decision maker (Calori *et al.,* 1994). Although the upper echelons model was originally more focused on the individual level since in most firms, the CEO has the most power, it is still of interest of some other researchers to focus on the entire top management team in terms of the unit of analysis (e.g. Zee and Swagerman, 2009; Carpenter *et al*., 2004; Finkelston and Hambrick, 1990). Hambrick and Mason (1984) argue that a top management team can generate a multi-level impact across hierarchical echelons. Hambrick and Mason (1984, p. 196) further argue that 'at a more practical level, study of an entire team increases the potential strength of the theory to predict, because the chief executives shares tasks and, to some extent, power with other team members.'

Secondly, the idea of demographic characteristics or personal attributes of top managers can be used as valid, even though imperfect, proxies of managers' cognitive

frames which in turn influence their strategic choices and actions. Upper echelons perspective suggests that past behaviour, experience and values are a function of observable characteristics of top management, which is managers' demographic characteristic. According to Hambrick and Mason (1984, p. 196):

> an emphasis on background characteristics, rather than on psychological dimensions, seems essential at this point in the development of an upper echelons perspective. First, the cognitive bases, values and perceptions of upper level managers are not convenient to measure or even amenable to direct measurement.

Hambrick and Mason (1984) argue that top managers' demographic characteristics are the central reason in determining organizational outcomes which influence their decision making and therefore their actions taking in the organizations that they lead. Hambrick and Mason (1984) further argue that this arises as demographic characteristics are related to cognitive bases, values and perceptions that influence the decision making of managers. These observable manager's demographic characteristics include age, tenure in the organization, education, socioeconomic roots, functional background, financial position and team homogeneity/heterogeneity (Hambrick and Mason, 1984). Upper echelons theory even suggests that the more complex the decision, for example risk taking propensity, the more imperative the personal characteristics of the decision makers. There has been research that document overall managers' effect which relies on observable manager demographic characteristics (e.g., age, education, functional background and tenure) as proxies for the unobservable cognitive frames of top executives which affect their preferences (e.g., Eze *et al.*, 2011; Bamber *et al*., 2010; Jensen and Zajac, 2004; Bertrand and Schoar, 2003; Pitcher and Smith, 2001; Finkelstein and Hambrick, 1996; Hitt and Tyler, 1991).

In strategic management literatures, upper echelons theory has been generally used in corporate strategy and structure (e.g., Hambrick *et al.*, 1996; Cannella and Hambrick, 1993; Wiersema and Bantel, 1992; Thomas *et al*., 1991; Eisenhardt and Schoonhoven, 1990; Miller and Toulouse, 1986), strategic persistence (e.g., Finkelstein and Hambrick, 1990), strategic choice (e.g., Zee and Swagerman, 2009; Rajagopalan and Spreitzer, 1997; Child, 1972), strategic leadership (e.g., Seaton and Boyd, 2007; Waldman *et al*., 2004; Waldman and Yammarino, 1999, Hambrick, 1997), strategic

decision processes or models (e.g., Peterson *et al.,* 2003; Hitt and Tyler, 1991), strategic actions (e.g., Carpenter *et al.,* 2001; Miller and Toulouse, 1986; Nadkarni and Narayanan, 2007) as well as strategic change (e.g., Boeker, 1997; Wiersema and Bantel, 1992). At its core, the upper echelons perspective argues that top management's personal characteristics exercise strong influence on present strategic choice and decision processes.

Various studies on performance also have drawn on upper echelons demography (both individual executive or entire top management team) in consequence of strategic choices to help resolve the influence of top management on corporate performance (Nadkarni and Herrmann, 2010; Cheng *et al*., 2010; Simsek, 2007; Auden *et al*., 2006; Peterson *et al.*, 2003; D'Aveni, 1990; Haleblian and Finkelstein, 1993; Gupta, 1984). Cheng *et al.* (2010) argue that various management demographic characteristics exert significant influences on corporate performance. Using Chinese corporate chairperson, they find that firms perform better when the chairperson possess university degrees and titles (academic and nationally certified title), are older in age and have short tenure periods. Cheng *et al.* (2010) further argue that within Chinese corporations, personal attributes of the chairperson are appropriate proxies of managerial networking competencies and critical human resources to conduct business, and are consequently related to superior corporate performance.

Auden *et al.* (2006) indicate that there is a significant correlation between top management team demographic characteristics and firm performance. Auden *et al.* (2006) conclude that three of the proposed four top management team demographic characteristics in their study, including age homogeneity, functional background heterogeneity, and team tenure heterogeneity influence firm performance. Additionally, they find that top management team performance was positively correlated to team tenure, suggesting that team performance improves as team tenure progresses. Regardless of the educational background of the top management team, Auden *et al.* (2006) find that the educational discipline heterogeneity was negatively related to the firm's performance.

Prior researchers have also applied upper echelons theory to the area of corporate social performance. Chen and Fan (2011) examine the relationship between demographic

characteristics of entrepreneurs and corporate social performance. By using a sample of listed companies of manufacturing in China, they find that the age and education of entrepreneurs has a weak explanatory power to corporate social performance. Chen and Fan (2011) also find that the functional background in the organization of entrepreneurs has a significant effect on corporate social performance, especially; entrepreneurs with output functions experience are connected with higher corporate social performance. They also find that the tenure in the organization of entrepreneurs has a significant effect on corporate social performance, especially; entrepreneurs with shorter tenure were more likely to perform higher corporate social performance.

Manner (2010) also draws on the CEO characteristics' effect on corporate social performance using the KLD Research Analytics CSP ratings. He shows that the differences in corporate social performance between firms are predicted by the different observable CEO characteristics. By controlling for firm and industry characteristics, Manner (2010) finds that strong corporate social performance in a sample of 650 public US firms, as measured by the strengths categories of KLD's ratings, is positively related to the CEO having a bachelor's degree in humanities, having various career experiences and being female. In addition, Manner (2010) discovers that the CEO with a bachelor's degree in economics and having short-term compensation are negatively related to the corporate social performance. Manner (2010) finally suggests that the CEOs have more discretion in influencing strong and perfect social performance than in impacting poor performance to the firm.

In his paper, Hambrick (2007) further updates the upper echelons theory by summarizing the notable refinements of the theory, the two vital moderators, namely, managerial discretion and executive job demands. First, managerial discretion which has been introduced by Hambrick and Finkelstein (1987) is to reconcile two opposing views about the effects of top executives on organizational outcomes. Hambrick (2007) concludes:

> One view, coming out of the prevailing tradition of strategic management, was that top executives greatly influence what happens to their organizations. The competing view, coming out of population ecology (…) and new institutional theory (…), was that

> executives have little effect because organizations are exceedingly inertial, swept along by external forces, and constrained by a host of conventions and norms.

Hambrick and Finkelstein (1987) define managerial discretion as the latitude of action in which it exists when there is a means of accounting for differing levels of constraints and multiple plausible alternatives faced by top management. Hence, top management matters in determining organizational actions and outcomes, but only to the extent that top management possesses sufficient discretion to make a variety of strategic choices. Hambrick (2007, p. 335) argue that:

> Upper echelons theory offers good predictions of organizational outcomes indirect proportion to how much managerial discretion exists. If a great deal of discretion is present, then managerial characteristics will become reflected in strategy and performance. If, however, discretion is lacking, executive characteristics do not much matter.

Second, executive's job demand which has been introduced by Hambrick *et al*. (2005) is to differentiate the degree of challenges or difficulties faces by top managers in dealing with their day-to-day task setting. Hambrick *et al*. (2005, p. 335) argue that executive job demands stem from three sets of factors; task challenges, performance challenges and executive aspirations. According to Hambrick (2007, p. 336):

> Executives who are under heavy job demands will be forced to take mental short cuts and fall back on what they have tried or seen work in the past; thus, their choices will reflect their backgrounds and dispositions. Conversely, executives who face minimal job demands can afford to be more comprehensive in their analyses and decision making; thus, their choices will more greatly match the objective conditions they confront.

Ge *et al.* (2009) in their working paper, examine empirical investigation of the effect of individual Chief Financial Officer (CFO) on accounting practices. They analyse these two potential moderators predicted by upper echelons theory, CFO discretion and CFO job demand. Ge *et al.* (2009) find evidence that the effect of CFO fixed-effects on accounting choices is stronger when they work with non-expertise auditors and CFO's job demands are likely to be greater when the firms that a CFO works for are more

complex. They conclude that their results are consistent with the predictions offered by upper echelons theory that CFO style being reflected more in accounting choices when CFO discretion and job demands are higher.

Hambrick and Mason's (1984) ideas of upper echelons theory have been extended beyond the strategic management discipline to also shape research in main stream economics (e.g., Bertrand and Schoar, 2003), accounting (e.g., Bamber *et al.*, 2010; Dyreng *et al.*, 2010; Ge *et al.*, 2009), corporate finance (e.g., Chevalier and Ellison, 1999) and information technology (e.g., Eze *et al.*, 2011; Chuang *et al.*, 2007). Of relevance to this study is the application of upper echelons theory to the area of corporate risk disclosure. According to Hambrick (2007), this theory plays a role in disclosure because top managers have an enormous influential power to lead the decision-making process in an organization. Since these managers have both superior access to and control over corporate information when compared to other corporate constituents, much of the decision rest on their discretion and strategic intent regarding the release of certain information, specifically voluntary risk disclosure information. Voluntary risk disclosure is such a complex, risk taking and ambiguous situation requiring trade-offs among multiple conflicting goals, such as protecting proprietary information that competitors could use against the firm (e.g., Dye, 1986).

2.6.2 Manager-Specific Characteristics, Risk Taking Propensity and Corporate Disclosure

In their original work, Hambrick and Mason (1984) construct 21 propositions regarding top management characteristics and company performance. These propositions are based on seven categories, namely, age, functional background, corporate influences, education, socio-economic roots, stockholding and group heterogeneity. In this particular study, five manager-specific characteristics are chosen to demonstrate the relationship with the corporate risk disclosure in Malaysian corporations. These include age, functional background, education, tenure and ethnicity. This study focuses on the observable demographic characteristics of top managers' as recommended by upper echelons theory. Specifically, top managers in this study refer to Chief Executive Officers (CEOs) and Chair of Audit Committees (CACs).

Nevertheless, it seems that there have not been any empirical studies published on the relationship between upper echelons and corporate risk disclosure (to the best knowledge of the researcher). Though prior literature suggests the importance of addressing the difference of top manager characteristics in corporate reporting disclosure (Bamber *et al.*, 2010), there is no study yet that has addressed this issue by linking the influence of manager-specific factor to corporate risk disclosure. This will provide an interesting avenue for empirical examination in future research.

This study conducts a comprehensive review but limited to the scope of strategic management, economics, finance and accounting to explore the relation between managers' demographic characteristics and their risk-taking propensity and tendency to make information disclosure. Hambrick and Mason's (1984) upper echelons theoretical perspective can provide the rationale for hypothesising associations between demographic characteristics of top managers and corporate risk disclose. This study suggests five demographic characteristics of top managers' personal characteristics, namely, age, functional track, education, tenure and ethnicity to likely influence top managers in disclosing risk information. The following discussion reviews prior literature covering these different types of manager-specific characteristics to build up the empirical schema in this study.

2.6.2.1 Age

According to Palsson (1996), age is an essential determinant for risk taking behaviour. In considering age effect, risk taking propensity always relates to youthfulness (Child, 1974). In relation to upper echelons theory, firms with younger managers will be more inclined to pursue risky strategies as opposed to firms with older managers which are more risk-averse (Hambrick and Mason, 1984) and tend to make more conservative decisions.

Taking into account age cohort, Ireland *et al.* (1987) suggest that individuals of similar age have similar life experiences and potentially similar values and beliefs stored as schemas. As a result they suggest that younger managers may place greater value on participative management than do older managers. Additionally, individual from older age cohort is more conservative as opposed to younger age cohorts (Bertrand and Schoar, 2003). In a similar vein, Schuman and Scott (1989) support the argument that

the generational disposition shaped by the crucial events experienced by a cohort during its youth exerts a main influence on its attitudes afterwards. They found that memories of crucial events such as political and social changes were structured by age in which early adulthood was the main period for 'generational imprinting'. Recently, Bamber *et al.* (2010) in their study of corporate voluntary financial disclosure find that managers who born before World War II as opposed to managers who born after the event, are more hesitant to anticipate financial forecast showing that older managers are more conservative in making risky disclosure.

Disclosure on risk information of companies is risky, revealing situations under uncertainty and there is a chance that the disclosure is inaccurate. Given that older managers may have only few years before retirement, the fear for such disclosures could prove inaccuracy will disrupt their financial and career security. In contrast, younger managers can be more risk taking through increasing disclosure of risk information under uncertainty because their career and financial security affairs have a longer time horizon (Barker and Mueller, 2002).

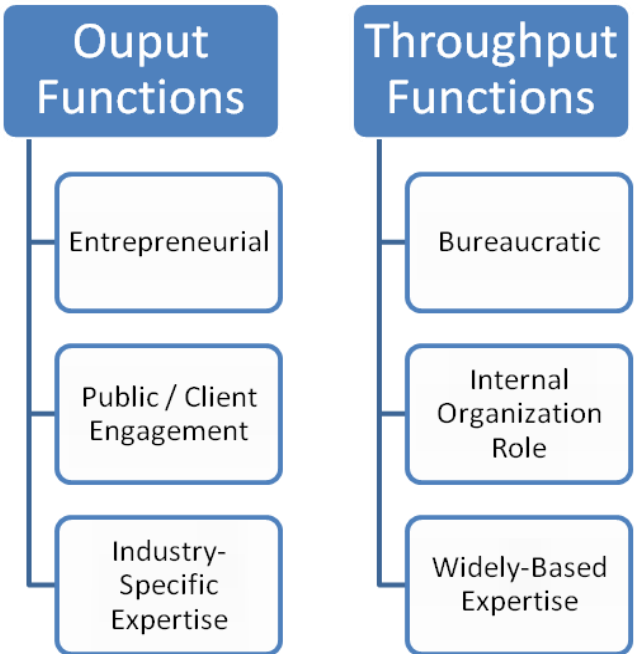
2.6.2.2 Functional Track

Hambrick and Mason (1984) differentiate functional track between 'output functions' and 'throughput functions'. These two categories align with the Miles and Snow's (1978) 'strategic typology'. Output functions relate to marketing, sales and research and development while throughput functions relate to production, accounting/finance, engineering, administration and legal. In this study, it is found that the CEO's and the CAC's functional background are beyond what has been categorised as output functions and throughput functions above. Therefore, to reflect this study and noteworthily the Malaysian corporate environment, this study will add several more categories to be classified as output functions and throughput functions.

There are three matched-categories developed for the purpose of functional track of top managers in this study. There are Entrepreneurial versus Bureaucratic, Public/Client engagement versus Internal organization role and Industry-specific expertise versus Widely-based expertise (Figure 2.2). The categorisations in Figure 2.2 are still within the definition and understanding of what is the difference between output functions and throughput functions. Because output functions always relates to risky effort, output

functions of managers is associated with the managers' propensity for risk taking. It is argued that additional output functions of managers (entrepreneurial, public/client engagement and industry-specific expertise) developed in this study is likely associated with the increasing of risk disclosure. Figure 2.2 shows the relationship of the categorisations of output functions and throughput functions that is used in this study.

Figure 2.2:
Functional Track Category
(Extended from Hambrick and Mason's (1984) Original Categorization)



Empirical research confirms that managers pursue strategies in line with their own functional expertise (e.g., Smith and White, 1987; Thomas *et al.*, 1991; Jensen and Zajac, 2004). Prior research characterised individuals in technical financial function as conventional, orderly and inhibited (Holland, 1997) suggesting they may adopt conservative disclosure styles. In this study, fewer risk disclosure is considered a dimension of conservative risk disclosure. Managers from technical functions are also less tolerance of ambiguity (Holland, 1997, p. 27). Hambrick and Mason (1984) posit that managers from finance favour more budget detail and thoroughness, which suggests managers from finance or accounting, may develop more precise communication strategy on risk information. Executives with legal backgrounds are

more sensitive to litigation risk, and so likely favour disclosure that does not promise too much. Bamber *et al.* (2010) find that, on average, managers promoted from legal backgrounds tend to guide expectations down (reflecting greater sensitivity to litigation risk) and managers promoted from accounting and finance develop more precise disclosure styles that are conservative in underestimating upcoming earnings.

2.6.2.3 Education

According to upper echelons theory, education level is related to the capability of ambiguity-tolerance, capacity for information processing and ability to evaluate alternatives as well as more willing to consider new or different ideas (Hambrick and Mason, 1984; Herrmann and Datta, 2002). Hitt and Tyler (1991) find that more educated top managers have greater cognitive complexity and are less conservative to process information for making decisions. Upper echelons theory suggests that the amount of formal education of top managers will be positively associated with innovation or risk taking tendencies (Hambrick and Mason, 1984).

Focusing on the professional accounting qualifications, it is argued that managers with this qualification have better knowledge of professional ethics. This professional ethics include honesty, integrity and trustworthiness which enable a manager to act with virtue and apply the moral point of view (Mintz and Morris, 2011). Therefore, managers with professional accounting qualifications are expected to disclose risk information appropriately than managers without professional accounting qualifications.

Focusing on the MBA degree in particular, the evidence regarding their effects on risk attitudes is mixed. Specifically, upper echelons theory predicts managers holding MBA degrees developed different styles than those without such education backgrounds. On the one hand, MBA holder is found to be more risk-averse and conservative. For example, Bamber *et al*. (2010) find that MBA holders tend to guide expectations upward, but their forecasts are more accurate. These arguments suggest that MBA holders may adopt more conservative risk disclosure. This findings conforms Finkelstein and Hambrick (1996, p. 104) suggestion that MBA qualification is part of the social and business elite who value conformity and conventionality. On the other hand, Bertrand and Schoar (2003) find that managers who hold an MBA degree seem to follow on average more aggressive strategies. In term of risk disclosure, this findings

show that managers with MBA degrees tend to disclose more risk information than their counterparts.

2.6.2.4 Tenure

Finkelstein and Hambrick (1990) noted that the organizational tenure of top managers has received the most extensive theoretical and empirical attention of all top managers demographic characteristics as evidenced from prior researches (e.g., Musteen *et al*., 2010; Hambrick *et al.*, 1993; Hambrick and Fukutomi, 1991). Top managers with long organizational tenure are expected to have great social cohesion, lessening the likelihood that individual members of a team will challenge the status quo (Michel and Hambrick, 1992). Likewise, Bantel and Jackson (1989) show that managers with longer tenures in an organization demonstrated a greater commitment to the organization's current state of affairs. Thus, long-tenured CEOs can be expected to commit to the status quo because of inferior adaptive aspirations (Cyert and March, 1992).

Moreover, upper echelons theory suggests that although lengthy tenure is associated with power, it has also been inferred to be associated with resistance to change. Hambrick and Mason (1984) argue that a better understanding of organizational procedures and policies can be achieved by having a long tenure in the organization and this in turn will make managers to refuse to change in their daily managerial processes. Empirical work supports the argument that increasing top managers' tenure lowers the likelihood of organizational and strategic change. For example, Simsek (2007) finds that tenure shapes the risk attitudes of the CEOs in evaluating the task. Due to this view, longer-tenured CEOs are likely to be more risk-averse and conservative in dealing with disclosure under uncertainty which leads to lower risk disclosure level.

2.6.2.5 Ethnicity

Upper echelons theory suggests that socio-economic background of senior executives can affect their decisions. However, according to Hambrick and Mason (1984, p. 201) '...there has been almost no studies that attempt to relate socioeconomic background to organizational strategy or performance.' Hambrick and Mason (1984) argue that the reasons are mainly because there is a high degree of homogeneity among socio-economic backgrounds of executives. Nonetheless, a study by Channon (1979) finds

some relationships between the socio-economic backgrounds of UK executives and the growth strategies of their firms. In her study, Channon (1979) argues that the entrepreneurs from the most widely diversified firms that have a high rate of acquisitions are likely to come from relatively humble origins. In this study however, socio-economic background is referring to the ethnic groups in Malaysia especially Malay and Chinese in which both ethnics play an important role in the socio-economics of the country (Abdullah, 2006). According to Haniffa and Cooke (2002), it is worth to acknowledge the norms and societal values in multiracial countries when each of the racial groups has chosen to maintain its own ethnic identity and value. Despite the fact that Malays form the largest population ethnic group in Malaysia, the Chinese have always been the most economically prominent (Mamman, 2002). The Chinese owned 69 percent of the total share capital of Malaysian companies (in the mid-1990), which is argued to contribute to the intensifying racial tension in Malaysia (Ball *et al.*, 2003).

In Malaysia, studies of the effect of culture and the extent of voluntary disclosure by Haniffa and Cooke (2002) and Haniffa and Cooke (2005) report a significant and positive association between Malay dominated boards and disclosure. Haniffa and Cooke (2002) suggest that Malay directors tend to disclose more compared to Chinese directors based on religious values that requires the Malay directors, who are Muslim, to perform business according to Islamic business ethics. Additionally, further study by Haniffa and Cooke (2005) used the legitimacy theory to explain the significant relationship between a Malay dominated board and corporate social reporting. They suggest that the Malaysian government policy that favours the Bumiputera by discriminating business opportunity based on ethnic group, influences the Malay directors to use corporate social disclosure as a reactive legitimating strategy. The purpose is to divert attention from disputed business practices, nepotism, and cronyism as well as close affiliation with the government, so that a continued influential voice at both governmental and institutional levels can be ensured (Haniffa and Cooke, 2005).

Other previous studies using Malaysian settings have examined how ethnicity of managers influences their attitude to the role of government (e.g., Mamman, 2002), audit fees (e.g. Gul, 2006; Yatim *et al.*, 2006), earnings management (e.g., Abdul Rahman and Mohamed Ali, 2006) and firm performance (e.g., Maran and Indraah, 2009). Though many studies conducted use ethnicity as one of the variables, none of

the studies focus specifically on the relationship between ethnicity and corporate risk disclosure. Furthermore, prior studies do not apply upper echelons theory as a basis in their studies, rather used legitimacy and political costs theories. Therefore, this study will provide an interesting perceptual avenue about this relationship.

2.7 AGENCY THEORY, OWNERSHIP CHARACTERISTICS AND FIRMS' REPORTING DISCLOSURE

This section reviews the literature on a general underlying theoretical perspective (agency theory) and a specific aspect of that theory (ownership structure) that have relevance to the specification of factors affecting corporate risk disclosure. Section 2.7.1 focuses on agency theory and Section 2.7.2 focuses on ownership structure, specifically, family ownership, government ownership and foreign ownership and their relations with a firm's reporting disclosure. Ownership structure in a company is expected to influence the company's disclosure propensity, based on arguments about agency conflicts and information asymmetry between owners and managers of the company. To understand and address this agency problem and information asymmetry, the application of agency theory is used.

2.7.1 Agency Theory

Agency theory was first introduced in the financial economics literature by Jensen and Meckling (1976) based on the agency model of the principal-agent relationship. According to Jensen and Meckling (1976, p. 308), an agency relationship is defined as 'a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent.'

One type of principal-agent relationship in the context of the firm is where the agent (manager) acts on behalf of the principal (shareholder). Jensen and Meckling (1976) point out that the separation of ownership and management results in agency costs in which these costs do not exist when the owner and manager is the same person. They argue that where there is a separation of ownership and control of a firm, there is a potential for conflicts of interest to exist between these two contracting parties then

agency costs are created. Jensen and Meckling (1976, p. 308) define agency costs as the sum of: (i) the monitoring expenditures by the principal; (ii) the bonding expenditures by the agent; and (iii) the residual loss.

Agency theory suggests that both parties (managers and shareholders) are utility maximizers. This behavior creates the incentives problems in a firm caused by the separation of ownership and control of resources between shareholders and managers. It is argued that managers may focus on their own personal interests, rather than maximizing shareholders' wealth. Because of this situation, agency costs will always arise. Jensen and Meckling (1976, p. 308) argue that:

> In most agency relationships the principal and the agent will incur positive monitoring and bonding costs (non-pecuniary as well as pecuniary), and in addition there will be some divergence between the agent's decisions and those decisions which would maximize the welfare of the principal.

Eisenhardt (1989) presents an overview of applications of agency theory in empirical research (Table 2.4) in which agency structure is applicable in a variety of setting. Where there are two differing goals between principal and agents, Eisenhardt (1989, p. 58) argues that, '…the domain of agency theory is relationships that mirror the basic agency structure of a principal and an agent who are engaged in cooperative behavior, but have differing goals and differing attitudes toward risk.'

In the context of the firm, a major issue is the information asymmetry between managers and shareholders. In this agency relationship, a manager has an information advantage over shareholders. Given the comparative advantage of information possession, it is possible that managers may or may not specify information on a voluntary basis to reduce or increase agency costs. Thus, it is crucial for shareholders to create some mechanisms to alleviate agency problems by aligning the interests between principal-agent or by monitoring the agent's opportunistic behavior.

Table 2.4:

Agency Theory Overview

Key idea	Principal-agent relationships should reflect efficient organization of information and risk-bearing costs
Unit of analysis	Contract between principal and agent
Human assumptions	Self-interest Bounded rationality Risk aversion
Organizational assumptions	Partial goal conflict among participants Efficiency as the effectiveness criterion Information asymmetry between principal and agent
Information assumptions	Information as a purchasable commodity
Contracting problems	Agency (moral hazard and adverse selection) Risk sharing
Problem domain	Relationships in which the principal and agent have partly differing goals and risk preferences (e.g., compensation, regulation, leadership, impression management, whistle-blowing, vertical integration, transfer pricing)

Source: Adapted from Eisenhardt (1989)

Of relevance to this study is the application of agency theory to the firm's reporting disclosure. Healy and Palepu (2001) argue that agency theory has been widely used to explain theoretically a firm's reporting disclosures. Agency theory posits that corporate disclosure can act as a mechanism which decreases the agency costs (Barako, 2007; Morris, 1987) because this information disclosure could signal to shareholders that managers work in their best interests (Rouf and Harun, 2011). In addition, agency theory suggests that some firms' reporting disclosure may provide a mechanism for reducing shareholders' monitoring costs and also reducing the problem of moral hazard (Schipper, 1981). Firms' reporting disclosure also can be a mechanism to influence shareholders' beliefs that the company is viable and being properly directed (Craswell and Taylor, 1992; McKinnon and Dalimunthe, 1993). Therefore, by increasing reporting disclosure, companies could increase shareholders' confidence (Barako,

2007) and decrease shareholders' uncertainty about the firm, hence, reducing information asymmetry.

Agency theory has been employed by many researchers to analyse the existence of voluntary disclosure by firms. Empirical studies on corporate voluntary disclosure have extensively examined the determinants of corporate voluntary disclosure levels, especially in the firm-level factors such as firm size and firm profitability (e.g., Salamon and Dhaliwal, 1980; Leftwich *et al*., 1981; Chow and Wong-Boren, 1987; Abd-Elsalam and Weetman, 2003; Patel *et al*., 2002; Oliveira *et al*., 2006; Wallace and Naser, 1995; Inchausti, 1997).

Focusing on corporate disclosure on risk information, agency theory claims that agency conflicts and information asymmetry between shareholders and managers will give rise to a demand for corporate risk disclosure in annual reports (Solomon *et al.*, 2000; Healy and Palepu, 2001). Deumes and Knechel (2008) find that the extent of voluntary internal control reporting is positively associated with indications of information and agency problems. Their results reveal strong evidence that managers provide relatively more disclosure on internal control if information problems and agency conflicts are high. This argument is supported by Hill and Short (2009) that voluntary risk disclosure information on key risks could lessen information asymmetry. It is widely accepted that if the party with more information signals to others, asymmetries can be reduced. Furthermore, managers who have better access to a firm's private information than external owners and investors can make credible and reliable communication to the market to enhance the value of the firm by reducing the costs of the agency relationship.

From a different point of view, disclosure of risk information may decrease a firm's perceived risk (Vandemele *et al.*, 2009); therefore, investors may prefer to invest in companies with a higher degree of risk disclosure (Healy *et al*., 1999). Since investors have access to more risk information from management, they will be more tolerance and comfortable to take risk regardless of the company's financial position. However, investors will perceive a higher level of risk of firm if such information was not disclosed, resulting in additional monitoring costs.

The effect of corporate risk disclosure on the value of the firm however can vary in relations to ownership structure. The disclosure of risk information that signals unique situations of the company may reveal valuable proprietary information. There may be situations when managers may not want to reveal all information relevant to shareholders because of the proprietary nature of information. The information on corporate risk disclosure might be affected by the composition of corporate ownership structure since different ownership structures will affect a firm's different disclosure choice. In this study, corporate risk disclosure is investigated for Malaysian top listed companies which are a context that is characterized by different ownership concentrations in the hands of families and government investors as well as foreign investors.

2.7.2 Ownership Structure

Ownership structure, arguably, is one of the mechanisms that aligns the interest of shareholders and managers of the company (Eng and Mak, 2003; Haniffa and Cooke, 2002; Chau and Gray, 2002; Hossain *et. al.*, 1994). Agency costs in relation to corporate risk disclosure for example, the costs of implementing control devices such as internal control and risk management system in the company, will vary with different corporate ownership structure. Agency theory proposes ownership structure as one of the main corporate governance mechanisms to resolve agency problems and suggests that concentrated ownership will result in more effective monitoring (Jensen and Meckling, 1976). However, different ownership structures will impact differently on the disclosure incentives by managers (Arshad *et al.*, 2012).

In developed countries where diffused ownership structures are more prevalent, the focus of researchers is on the conflict of interest between outside shareholders and managers, whereas in Asia where ownership concentration structures are more dominant the principal-agent problem changes to conflicts between the controlling shareholders and the minority shareholders (Fan and Wong, 2003; Claessens and Fan, 2002). This ownership tension allows the controlling owners to increase effective control of a corporation by determining how the company runs and may expropriate the wealth of minority shareholders.

Various aspects of ownership structures have been studied in previous research (e.g. family ownership, government ownership, foreign ownership, institutional ownership and managerial ownership). In Malaysia, corporate ownership is normally characterized by concentrated shareholdings. Lim (1981) finds the ownership of shareholding among the 100 largest Malaysian firms in the 1960s to be highly concentrated. This finding is supported by Abdul Samad (2004) and Haniffa and Hudaib (2006) who also find that more than half of the total equity in the corporate sector in Malaysia held by the five largest shareholders has been highly concentrated.

Therefore, this study will examine three aspects of a firm's ownership structure, namely, family ownership, government ownership and foreign ownership. The first two types of ownership structures are chosen to reflect the identity of Malaysian corporations in which they are surrounded by a highly concentrated or large ownership environment in the hands of family and government (Arshad *et al*., 2012). The foreign ownership structure is included because it is expected to exert more of a monitoring mechanism provided by outsiders or foreigners within Malaysian corporations. The following discussion reviews prior literature covering these three different types of ownership structure and its relation to the firm's reporting disclosure.

2.7.2.1 Family Ownership

A study of corporate ownership structure of 27 countries around the world by La Porta *et al.* (1999) reveals that Asian countries with poor shareholder protection are usually owned by families or the state as opposed to large corporations in developed countries with very good shareholder protection, such as the US and UK. The dissimilarity of Asian firms from firms in the developed countries is found in the existence of a more concentrated ownership rather than dispersed ownership structure where family control is common in both small and established firms (Mak and Kusnadi, 2005). The controlling shareholders in family-controlled business groups often control the firms through pyramidal structures which are common in a country with poor investor protection. Family-controlled business groups have considerable participation in the management process and have the power to expropriate minority shareholders. Unlike western economies, many companies in East Asian countries are family-owned and family-managed or directed, with the major shareholders often also directors and managers (Ng, 1998; Ball *et al.*, 2003). Concentration of ownership in the hands of

family members through pyramidal and cross-holding structures affects the nature of contracting, creating agency conflicts between controlling owners and outside shareholders (Fan and Wong, 2002).

There are two contrary views regarding the relationship between family firms and agency costs. On the one hand, most of existing literatures (Arshad *et al.*, 2012; Silva and Majluf, 2008; Martinez *et al*., 2007; Perez-Gonzalez 2006; Anderson and Reeb 2003) draws attention to the likelihood that concentrated ownership by family firms creates agency costs. Family firms might use their concentrated shareholding to fulfil their own interest by expropriating the wealth of other shareholders through spending firm resources such as excessive compensation. The management of family firms is also usually less effective and has a lower level of professionalisms since its wealth is undiversified. In addition, family firms tend to manage their firms too closely and be risk avoidant where they might follow strategies that favour family objectives, for example nominate members on the board of directors in favour of a family-owner whose interests are not aligned with other shareholders' interests.

On the other hand, concentrated family shareholdings may have incentive to reduce or lessen agency costs. This has been agreed by several other researchers (Wan Mohamad and Sulong, 2010; Silva and Majluf, 2008; Bartholomeusz and Tanewski, 2006) through a better alignment of manager and shareholders' interests. As noted by previous researchers, Bartholomeusz and Tanewski (2006) highlight several reasons that favour the notion that family firms as agents will reduce agency costs. The reasons include (i) family firms have more motivation to keep their assets as the company's well-being in terms of costs and benefits are tied directly to the company's good; (ii) family firms also have greater expertise, for example in terms of technical knowledge that places them in a better position to excellently monitor their business; (iii) family firms make every effort to maximize their long-term assets in order to protect the family's goodwill and reputation; and (iv) since family firms are administered by family members, this unique and exceptional relationship between family members on the board develops faithfulness, devotion and effective communication and decision making, which in turn reduces the agency costs.

In the context of voluntary disclosure, arguably, the problem of information asymmetry and opportunistic behaviour should be lessened due to the fact that the controlling power still remain one and the same as the company being in charged by family owners. According to Arshad *et al*. (2012), this controlling power is likely to occur because family members generally sit on prominent positions whether on the board of directors or in the management teams. Therefore, controlling owners have more access to internal information of the firm, and may not have to rely, to a greater extent, on public disclosure to manage their investment. Thus, it leads to low agency costs and reduced information asymmetry. In the same way, they limit their information disclosure to the public in order to prevent leakage of proprietary information to competitors as well as to avoid unwanted political and social scrutiny, but at the expense of minority shareholders. This exceptional family ownership engenders little demand for disclosure in excess of mandatory requirements.

Previous studies (e.g., Mohd Ghazali and Weetman, 2006; Chau and Gray, 2002; Ho and Wong, 2001; Chen and Jaggi, 2000) provide evidence that the presence of family members on the board gives little motivation to disclose voluntary information. This is because the demand for public disclosure in these closely held firms is relatively weak in comparison with companies that have wider ownership. For example, Ho and Wong (2001) find that the percentage of family members on the board is negatively related to the extent of voluntary disclosure in Hong Kong. Additionally, Chau and Gray (2002) observe a similar finding regarding strategic, financial and non-financial disclosure using a sample of listed companies in Hong Kong and Singapore. Chau and Gray (2002) argue that 'the prevalence of family companies on a stock exchange may result in less demand for corporate disclosure than found in Anglo-American countries because the major providers of financing already have that information'. This signifies that while concentrated ownership in general reduces disclosure, that effect is specifically pronounced when the firm is family-controlled. Gray's (1988) secrecy hypothesis also argues that where a firm's shares are held by family-controlled firms, there is a preference for confidentiality and restriction of disclosure of information about the business only to those who are closely involved with its management and financing.

Using Malaysian companies as a sample, Haniffa and Cooke (2002) find a significantly negative relationship between the proportion of family members on the board and the voluntary disclosure level. The demand for voluntary disclosure is less when there are many family members on the board as they have superior inside information. Moreover, similar findings between family-controlled firms and the voluntary disclosure level after the 1997 financial crisis is reported by Mohd Ghazali and Weetman (2006). Even after the crisis and the reformation of corporate governance, they argue that family-controlled companies still remain secretive which suggests they resist attempts to change their attitudes and preserve a tradition inherited from the past in relation to greater voluntary disclosure at the point of regulatory change. Arshad *et al*. (2012) conduct a similar study in Malaysia focusing on risk reporting disclosure. Their study was for the years 2008 and 2010, after the revision of the Malaysian Code on Corporate Governance in 2007. Similarly, their findings imply that in the absence of mandatory risk reporting requirements, family owners still acknowledge the importance of risk management, which improves their decision-making.

As reported in The World Bank Report (2005)[20], an analysis of a sample of the ten largest companies by market capitalisation, shows that the five largest shareholders in these companies owned 60.4 percent of the outstanding shares and more than half of the voting shares. Additionally, the report provides evidence that 67.2 percent of shares were in family hands, 37.4 percent had only one dominant shareholder and 13.4 percent were state-controlled. Similarly, prior empirical studies also show that the amount of family shareholdings within Malaysian companies is large. Recently, a study by Ibrahim and Samad (2011) showed that family ownership constitutes over 43 percent of the main board companies of Bursa Malaysia from 1999 through 2005. These statistics confirm that the amount of shares held by family members in Malaysia is significant. Such high ownership has led the dominant shareholding - family to make key decisions on their own like deciding risk information disclosure in annual reports. As a result, the agency problem in family-owned firms stems from the conflict of interest between owners/managers and minority shareholders (Shleifer and Vishny, 1997).

[20] See also Thillainathan (1999) and Claessens *et al*. (2000).

2.7.2.2 Government Ownership

As mentioned before, concentrated ownership in the hands of government is a particular characteristic of companies in Malaysia (Mohd Ghazali and Weetman, 2006). To date, government participation has emerged as an important force in corporate monitoring, serving as a mechanism to protect minority shareholders' interests. Government ownership in this study is representing by the ownership of government instititutions[21].

Proponents of the active monitoring hypothesis believe that government has a greater incentive to actively monitor corporate disclosure practices due to the large ownership stake they have invested in firms. Government ownership is seen as a mechanism for limiting the costs and minimizing the information asymmetric arises from agency problem within corporations. Eng and Mak (2003) argue that government, in general, can utilize their resources for attaining information about the particular company from other sources. This sophisticated power of government could give advantage for them to gain easier access to different channels of financing than non-government ownership firms. Therefore, the presence of government as a major shareholder in a company could align information asymmetries, such as the imperfect information given to the investors about the value of the firm.

Government ownership may also mitigate agency problems between shareholders and managers by creating some kind of pressure for companies. The pressure from government can help companies to disclose additional information (Mohd Ghazali and Weetman, 2006) and reduce the expected costs and the negative impact on firm value (Said *et al.,* 2009). This is because the government is accountable to the public at large and it is government's task to restore corporate integrity and market confidence. Therefore, through additional disclosures the companies are showing to their shareholders that they are doing their part to solve the agency problems.

[21] The government institutions include the Ministry of Finance (MOF), Khazanah Holding Berhad, Employees Provident Fund (EPF), Permodalan Nasional Berhad (PNB), Lembaga Tabung Haji (LTH), Kumpulan Wang Amanah Pekerja (KWAP), Lembaga Tabung Angkatan Tentera (LTAT), Kumpulan Wang Simpanan Pekerja (KWSP), Pertubuhan Keselamatan Sosial (PERKESO) and state agencies which include agencies under the control of state.

In relation to firm's reporting disclosure, prior empirical studies on the relationship between government ownership and firms' reporting disclosure provide inconclusive evidences. In Singapore, a study by Eng and Mak (2003) examined the impact of ownership structure, namely government ownership on voluntary disclosure. In their study, Eng and Mak (2003) use two proxies for government ownership which are i) Singapore Government-Linked Companies (GLCs) and ii) the proportion of ordinary shares owned by the government. Using 158 firms listed on the Stock Exchange of Singapore, they conclude that both proxies of government ownership in their study are associated with increased firm disclosure. Eng and Mak (2003) argue that this positively significant association is consistent with the argument that disclosure could mitigate agency problems since the presence of government ownership increases moral hazards and agency problems. This positive association between government ownership and more extensive disclosure has been supported by a study done by Makhija and Patton (2004). They argued that the comprehensive disclosures allowed companies to signal the government's commitment to achieve various objectives of minority shareholders and to gain society's confidence.

Several other studies have been within the Malaysian environment. Amran (2007) finds that companies with high a percentage of government shareholding tend to disclose more corporate social reporting disclosure compared to companies with low government shareholdings. Said *et al.* (2009) find that government ownership is the most significant variable that influences the extent of corporate social disclosure from annual reports and companies' websites in Malaysian public listed companies. However, in terms of the effect of the Asian financial crisis in 1997, there are two different findings regarding the influence of government ownership in firms' reporting disclosure. First, Mohd Nasir and Abdullah (2004), who examine the influence of financially-distressed firms in a post economic downturn period, support the government's initiatives in promoting transparency. Using the matched healthy firms, they examine the annual reports for financial years 2000 and 2001. Mohd Nasir and Abdullah (2004) further explain that voluntary disclosures levels in Malaysia are greater with the influence of the extent of government-linked companies' shareholdings. On the other hand, a study by Mohd Ghazali and Weetman (2006) looked at the Malaysian environment after the 1997 financial crisis in evaluating whether the regulatory reaction to the crisis increased the awareness of voluntary

disclosure. They concluded that, regardless of the disturbance of the economic crisis, the ownership by government is less influential and does not promote greater disclosure. Mohd Ghazali and Weetman (2006) further argue that companies with major government shareholders are politically connected and in order to protect their political linkages they tend to disclose less information.

In parallel to this study, Arshad *et al.* (2012) have undertaken a study regarding the influence of ownership structure on risk reporting practices in Malaysia. They examine the disclosure practices of 242 Malaysian listed companies relating to both the quantity and quality of risk reporting practices in the years 2008 and 2010. Their findings indicate that the amount of both quantity and quality of risk reporting made by Malaysian firms increased with the increase in government ownership within companies in both years. They thus conclude that it is necessary to have government as an owner, as companies have more incentives to make risk reporting disclosure.

All in all, the presence of government ownership in companies is expected to establish a climate of greater public accountability and transparency. In order to maximize companies' transparency, it is likely that the government prefers companies to make greater public disclosure. Beside the likelihood that ownership by government would increase firm's share value, the government would choose to hold on to large stakes in firms that are perceived to have strategic value. Because of the public interest in these firms, it is expected that greater government ownership would result in more corporate risk disclosure.

2.7.2.3 Foreign Ownership

For decades, Malaysia has been receiving a lot of foreign direct investment to spur its economic growth (Athukorala, 2001). Once under the British rule of colonization, some Malaysian public listed companies continue to have foreign investors that remain dominant in their corporate ownership structure. Foreign equity ownership continues to play a crucial role in stimulating the economic growth of companies and the country. Moreover, foreign investors could enhance corporate governance practices, which taken together impacts significantly on the level of firms' reporting disclosure.

Various theoretical and empirical studies have been undertaken by prior researchers in an attempt to study the relationship between foreign ownership and disclosure practices especially in developing countries, such as Zimbabwe (Mangena and Tauringana, 2007), Kenya (Barako, 2007; Barako *et al.*, 2006), India (Singhvi, 1968), China (Wang *et al.*, 2008) and Malaysia (Ho, 2008; Haniffa and Cooke, 2005; 2002). These studies have indicated that the determination of corporate disclosure strategy of a firm is influenced by the presence of foreign ownership.

An earlier study on this relationship by Singhvi (1968) reported that foreign ownership influences companies' reporting practices in India. Later, Barako *et al.* (2006) also find that the levels of foreign ownership have a positive and significant influence on voluntary disclosure in Kenyan companies. Still using the Kenyan companies annual reports as a sample, Barako (2007) extends his previous studies by looking at the determinants of voluntary disclosures in four categories of disclosures, namely, general and strategic disclosure, financial disclosure, forward-looking disclosure and social and board disclosure. He examines the voluntary disclosure practices of listed companies in Kenya over a ten-year period from 1992 to 2001. From his longitudinal analysis, Barako (2007) finds that foreign ownership has a strong positive relationship to all the four categories.

Mangena and Tauringana (2007) examine the association of foreign share ownership with firm-level disclosure and corporate governance structures in companies on the Zimbabwe Stock Exchange. By using 118 annual reports of non-financial listed companies for years 2002 and 2003, they find that foreign ownership is positively and significantly related to all the determinants of disclosure and corporate governance tested in their study. Mangena and Tauringana (2007) argue that good corporate governance relates to high disclosure and high disclosure reduces information asymmetry. As high disclosure by companies will reduce the risk of trading loss by investors, Mangena and Tauringana (2007) conclude that foreign investors prefer to invest in companies with less information asymmetry, as well as companies with effective corporate governance structures.

Focusing on the Malaysian firms' reporting disclosure perspective, two well-structured studies by Haniffa and Cooke (2002) and Haniffa and Cooke (2005) documented strong

support for the fact that foreign ownership has a significantly positive association with the voluntary disclosure level and corporate social disclosure, respectively. Haniffa and Cooke (2002) argue that there is a greater need for disclosure as a means by foreign owners to monitor the actions of management. Moreover, Haniffa and Cooke (2005) argue that corporate social disclosure within Malaysian companies can be a tool for a pre-emptive legitimating strategy focusing the effort to obtain continued capital inflow while delighting ethical investors. Ho (2008) finds that firms with a majority of foreign ownership have motivation to disclose in excess of mandatory requirements. Her findings indicate that the presence of foreign investors in a firm pushes firms to voluntarily disclose more information in annual reports in order to attract funds from foreign country investors. Consistent with previous research findings, it is possible that this group of investors can influence corporate risk disclosure practices of Malaysian listed companies.

In developing countries such as Malaysia, foreign ownership plays an important role. According to Yudaeva *et al.* (2000), foreign ownership is appreciated by local firms as one of the ways of technologically upgrading. They argue that this upgrading can take a different form, such as, via direct import of new capital, or by replicating technologies of foreign-owned firms rather than producing their own ones. Yudaeva *et al.* (2000) also argue that foreign ownership in developing capital market can help to increase the level of competition between local firms. At the same time, local firms might therefore compete with each other and be forced to quick restructure. In addition, Yudaeva *et al.* (2000) argue that in relation to the growth of developing economies, western managerial techniques can be the major sources and good prospect to be followed by local firms. One of these management techniques that could come from western ownership is higher corporate transparency including insights from providing corporate disclosure of various types of risk information.

Abdul Samad (2004) finds that foreign shareholdings comprise of 5.01 percent in Malaysian public listed companies. However, the Malaysian government's restriction on foreign ownership dictates that foreign investors can only hold up to 30 percent of a company's shareholding. While the 30 percent foreign ownership cap still maintains, there has been an increase in foreigners' stake in some business sectors following the liberalization rule. This economic liberalization of Malaysian stock markets allows for

greater foreign investment under the Securities Commission's Capital Market Master Plan[22] to participate in domestic stock markets.

Many of the multinational companies incorporated in Malaysia, for example, Shell Refining Co. (Malaysia) and Nestle (Malaysia) Berhad are subsidiaries of huge corporations in foreign countries. The presence of foreigners as shareholders will increase monitoring of managers behaviour which could reduce the agency problem and information asymmetry. This is possible because of monitoring by foreign shareholders could influence the extent of information disclosure in order to meet foreign reporting requirements. Hence, foreign ownership can be a determinant in explaining the variability in risk information disclosure in the annual reports of Malaysian companies.

2.8 VALUE RELEVANCE STUDIES: THE MODEL AND ITS RELATIONS TO CORPORATE REPORTING DISCLOSURE

In this section, two areas of the literature of relevance to this study are reviewed. Section 2.8.1 focuses on the nature of the value relevance model and Section 2.8.2 focuses on value relevance research that is specific to company disclosures. Reported disclosures, to some extent, are expected to influence investors' perception of the value of a company.

2.8.1 Value Relevance Model

Since the major focus of financial reporting is information for equity investment, value relevance models assess how well accounting numbers reflect accounting information used by equity investors (Barth *et al*., 2001). An 'accounting number' is defined as value relevant if it has a predicted association, whether positively or negatively, with stock prices (Barth *et al*., 2001). The objective of value relevance research is to relate annual financial statement figures to a measure of firm value, and to assess the relation of such information to the determination of value (Dahmash and Qabajeh, 2012).

[22] The introduction of the Capital Market Master Plan (CMP) by the Securities Commissions (SC) in February 2001 is to chart the direction of the Malaysian capital market for the next ten years (2001 to 2010).

Traditionally, earnings and book values are said to contribute to value relevance as these two accounting information items form the basis for Ohlson's (1995) 'clean surplus' model. According to Collins *et al.* (1997), book values and earnings have been successfully shown as significant independent variables in explaining stock prices. In the 'clean surplus' relations between accounting numbers and market value of a firm, Ohlson (1995) argues that changes in the equity statement include the items in the balance sheet and income statement which are book value and earnings. Its formula requires a change in book value to equal earnings minus dividends (net of capital contribution).

Accordingly, the relation between book value of equity, earnings and dividends can be expressed as follows:

$$\boldsymbol{bv_t = bv_{t-1} + x_t - d_t}$$

Where;

bv_t = book value of equity at date t
x_t = earnings for period t
d_t = dividends paid at date t

Book value of equity at date t-1 multiplied by the risk free rate is considered as the normal earnings of the firm. Then the actual reported earnings for the period t minus the normal earnings can be defined as abnormal earnings (Ohlson, 1995; Dahmash and Qabajeh, 2012).

$$\boldsymbol{X^a_t = x_t - rb_t}$$

Where;

X^a_t = abnormal earnings for period t

Ohlson (1995) develops and analyses a model of a firm's market value as it relates to contemporaneous and future earnings, book values and dividends. Ohlson's (1995) appealing model of the relation between the firm's market value and accounting numbers is based on the simple premise that the present market value of a firm equals the net present value of expected future dividends. Clean surplus accounting implies that the market value of the firm is equivalent to book value plus the net present value of future abnormal earnings and also that a linear model can be used to capture the market value influences of accounting information (Ohlson, 1995; Feltham and Ohlson, 1999). Ohlson's (1995) value relevance model satisfies many appealing properties and this model is used as a benchmark in conceptualising how market value relates to accounting data and other information.

Ohlson's (1995) Value Relevance Model

$$\boldsymbol{P_t = \alpha_0 + \alpha_1 bv_t + \alpha_2 x^a_t + \alpha_3 V_t}$$

Where;

α_0 = Intercept
P_t = market value of the firm's share price at the end of the financial year t
bv_t = book value of the firm's share equity at the end of the financial year t
x^a_t = abnormal firm's earnings per share at the end of the financial year t
V_t = other information at the end of the financial year t

The above model has a particular significance for this study, since objective four of this study applies the model with a certain modification. Details of the model are discussed in the next chapter (Chapter 3).

The major purpose for conducting tests of value relevance is to assess the relevance of accounting numbers, rather than to assess the usefulness of the accounting numbers. According to Barth *et al*. (2001, p. 78):

> ...value relevance studies are designed to assess whether particular accounting amounts reflect information that is used by investors in valuing firms' equity. Because

> ‘‘usefulnes’’ is not a well-defined concept in accounting research, value relevance studies typically do not and are not designed to assess the usefulness of accounting amounts.

2.8.2 Value Relevance of Firms’ Reporting Disclosure

The nature of financial reporting and corporate information disclosure itself is critical for the functioning of an efficient capital market (Healy and Palepu, 2001). Wang *et al.* (2005) suggest that increases in firm value resulting from the increase in stock prices are a consequence of the informativeness of additional disclosure by firms. In business, increases in share prices are an obvious benefit of share ownership. The separation of companies' ownership from their control would result in a demand for corporate disclosure in order to reduce information asymmetry. Comprehensive and informative corporate disclosure also will enhance investors’ perception about the incremental value of information disclosed when comparing with others who do less disclosure in practice (Healy and Palepu, 2001; Leuz and Verrecchia, 2000). In Malaysia where the level of ownership concentration is high, corporate disclosures could be a potentially important means of communication between management and large controlling shareholders. To the extent that large controlling shareholders focus on the objective of maximizing share prices, their interests are aligned with those of minority shareholders and at the same time will discipline the management to produce value-relevant information (Banghoj and Plenborg, 2008).

An increase in public information disclosure usually leads to direct capital market benefits by increasing stock prices (Orens *et al*., 2009; Botosan 1997) or through indirect capital market benefits, such as improved analysts forecasts (e.g. Healy *et al.,* 1999) due to a reduction in informational asymmetry. Studies have shown improved quality of a firm’s reported disclosure enhances firm value by reducing the firm's cost of capital (Makhija and Patton, 2004; Botosan, 1997), increasing the actual cash flows that shareholders receive as a result of a reduction in agency problems (Lambert *et al.,* 2007) due to lower costs of monitoring (Healy and Palepu, 2001).

On the other hand, an increase in information disclosure might also have a negative value, even if its production is costless to the company. This is because; according to Hassan *et al.* (2009, p. 81):

> investors may perceive themselves to be worse off if they consider that the company is disclosing information which might be exploited to their detriment. Investors might suspect or misinterpret the intentions of the company in providing more information to the market without an obligation to do so.

In terms of value relevance of a firm's financial information disclosure, there is a body of accounting research that examines the value relevance of information presented under financial reporting standards. The empirical evidence from this literature suggests that some financial reporting standards generate value relevance of accounting information. In particular, substantial studies have looked into the value relevance of financial instruments and derivatives disclosure in financial firms (e.g., Ahmed *et al*., 2006; Wang *et al.,* 2005; Barth *et al.,* 1996; Eccher *et al.*, 1996) as well as in non-financial firms such as in Taiwan (e.g., Chen and Fu, 2012) and Malaysia (Hassan and Mohd Saleh, 2010). Another substantial body of research investigates the value relevance of capitalisation versus non-financial disclosure in presenting intangible assets such as research and development in corporate reports. However, the financial statements number are affected only by capitalisation and as such, markets may react differently for capitalisation compared to non-financial disclosure. Studies on this matter include among others, Aboody and Lev (1998), Barth and Clinch (1998), Espahbodi *et al.* (2002), Kallapur and Kwan (2004) and Ritter and Wells (2006). Another branch of accounting research examines the value relevance of value-at-risk disclosure (e.g., Lim and Tan, 2007).

With regard of value relevance of non-financial information disclosure, some prior empirical studies have taken place in developed economies. These studies which examine the impact of the extent of non-financial information disclosure in general namely, voluntary disclosure, mandatory disclosure or both on the market value of companies, report a significant relationship (Botosan, 1997; Lang and Lundholm, 2000). Studies related to value relevance of voluntary disclosures further contribute to the literature by examining whether companies in a setting with a modest level of

accounting regulation, fill out the information asymmetry through voluntary disclosure thereby improving investor protection. On the other hand, in emerging economies some empirical studies on this relationship have been developed such as in Taiwan (Sheu *et al.,* 2010); Turkey (Uyar and Kilic, 2012); Jordan (Al-Akra and Ali, 2010) and Egypt (Hassan *et al.,* 2009) that show the effect of general disclosure on market valuation. This indicates that when information is relevance, it is valued by the market (Hassan *et al.,* 2011).

Al-Akra and Ali (2010) in their study investigate the value relevance of voluntary disclosure in Jordan. They employ panel data for 243 firm-year annual reports to show the relationship between voluntary disclosures and firm value. They argue that enhanced voluntary disclosure levels of Jordanian listed companies are rewarded with higher valuations by the market over a nine year period, from 1996 to 2004.

Uyar and Kilic (2012) further support the findings in Al-Akra and Ali (2010). In their study, they examine whether listed Turkish companies' voluntary disclosure practices are value relevant in the capital market. Their model focus on a sample consisting of 129 manufacturing companies listed on the Istanbul Stock Exchange for the year 2010. They find that voluntary disclosure is value-relevant in its impact on firm value. This implies that market participants place value on voluntary disclosure. According to Uyar and Kilic (2012), by this result, it should be like a signal for companies to disclose more information to investors.

Banghoj and Plenborg (2008) on the other hand, conduct a study in Denmark focusing on the voluntary disclosure by Danish companies. The study was for the year 1996 to 2000 which documented that the level of disclosure increased by approximately 40 percent during these periods. Despite an increased level of voluntary disclosure, Banghoj and Plenborg (2008) find that the higher level of voluntary disclosure from annual reports reduces the association between current stock returns and future earnings. Similarly, their findings indicate that voluntary information in the annual report may not contain value-relevant information about future earnings or alternatively, investors are not capable of incorporating information in the firm value estimates.

Hassan *et al.* (2009) make a comparative analysis of the value relevance of voluntary and mandatory disclosures, in a market that applies *International Financial Reporting Standards* with limited penalties for non-compliance. Their findings indicate that mandatory disclosures have a highly significant negative relationship with firm value. Hassan *et al.* (2009) argue that investors may interpret the high levels of risk disclosures as an adverse signal about the future value of the company based on insider information known by management which emphasizes the complex interplay of factors determining disclosure effects. Further, their results show that voluntary disclosures have a positive but insignificant association with firm value. They thus conclude that risk disclosure can increase or decrease firm value depending on the complex interplay of a number of possibly conflicting factors.

Specifically, in an attempt to evaluate the value relevance of non-financial information of corporate disclosure, other studies utilize specific non-financial information as variables. This includes among others, non-financial performance information such as population size, market penetration, customer satisfaction and balanced score card (Amir and Lev, 1996; Ittner and Larcker, 1998; Banker *et al.*, 2000; Riley Jr. *et al*., 2003; Coram and Monroe, 2004), intellectual capital information (Anam *et al*., 2011; Orens *et al*., 2009), patent quality information (Hirschey *et al.*, 2001), compensation information (Sheu *et al*., 2010), corporate social responsibility information (Richardson *et al*., 1999) as well as information security (Gordon *et al.*, 2010).

In addition, Botosan and Plumlee (2002) suggest however that the type of disclosure is crucial to any analysis as the market responds differently to different types of disclosure. Of relevance to this study is the focus on value relevance of corporate risk disclosure. Similar to other types of disclosure, incentives for managers to produce corporate risk information within their firms also derive from capital market forces. Solomon *et al.* (2000) added that most of the investors agree that increased risk disclosure would help them in making rational future investment decisions. Their study also notes that share prices are potentially important in measuring investors' evaluation on both mandatory and voluntary risk information disclosure in annual reports.

Uddin and Hassan (2011) examine the degree of the effect of corporate risk disclosure on the level of stock volatility (AEVOL) and investors' market risk (BETA). Drawn on

49 UAE corporations listed on Dubai financial market and Abu Dhabi stock market for the year 2005, Uddin and Hassan (2011) suggest that more disclosure of corporate risk information may increase investment uncertainty. Hence, stock volatility increases. Additional risk information disclosure may attract investors and help them to manage risk in their portfolio as well as minimize the market risk. However, Uddin and Hassan (2011) argue that with the additional risk information, disclosure will deteriorate the beta. They further argue that excess and unnecessary information is not useful for reducing stock volatility and market risk.

Similarly, Ismail *et al.* (2012) test the relationship between quantity and quality of voluntary risk disclosure and firm value in Malaysia for 2006 and 2009. As proxies by share price and Tobin's Q, they find that quantity of voluntary risk disclosure and quality of voluntary risk disclosure are positively significant and negatively significant to firm market value in both years, respectively. With support of prior studies, Ismail *et al.* (2012) argue that qualitative voluntary risk disclosure might not give benefits to firms. In addition, they conclude that proprietary information contained in voluntary risk information might be inappropriate to publicly disclosed in annual reports although it would help to enhance investors' confidence and mitigate agency problems.

In summary, prior empirical studies on the relationship between corporate disclosures of non-financial information and firm value indicate mixed findings. Managers are motivated by reputation and contracting considerations to increase firm value. This creates an incentive to release information to the market. The reason is that more risk information increases investor confidence in the firm, with the result that the market price of its shares will raise. Therefore, most prior studies argue that revealing more public information could safeguard investors' confidence in the firm. However, several other studies contend that more enlightening reporting disclosure due to additional information will create uncertainty about the future prospects of a company, thus firm value will decrease. According to Uyar and Kilic (2012), there is still a scarcity of studies regarding how the market perceives voluntary disclosure. Hence, the effect of corporate disclosures upon firm value is still an open empirical issue. In this study, the relationship of regulated and non-regulated risk disclosure to firm value will be further investigated.

2.9 SUMMARY AND CONCLUSION

In closing, this chapter provides a comprehensive review of the key corporate disclosure literature. This chapter has covered different areas including the debate on mandatory and voluntary disclosure, the disclosure principle, signalling theory, the proprietary cost theory, overview of corporate risk disclosure, upper echelons theory and manager-specific characteristics, agency theory and ownership characteristics and the impact of disclosure on the company's value. The prior research highlighted in this chapter suggests that managers have incentives whether or not to disclose enough information to serve the necessity for various user groups (especially investors). The gap in reporting between companies and investors is a cause of real interest on the ground that disclosure is critical for the success of capital markets. Companies are put under pressure to disclose reliable and relevant information in order to reduce investor uncertainties hence improving the transparency of reporting. On top of that, mandatory and voluntary disclosures, the disclosure principle, signalling theory, proprietary cost theory were discussed primarily in order to generate the first hypothesis in this study.

Moreover, there has been an increasing demand for company information by investors. After reviewing the literature, it can be inferred that there are several internal (management characteristics, ownership structures) and external (market perception, economic environment, competition) factors affecting a firm's activities and reporting. The rapid transformations in economic activities, competition and technologies as well as the growing globalisation of financial markets have certainly exposed companies to a greater attention of information by investors. To survive and compete, companies are adjusting many things and one of them is the way they managed their risks, which will include not only risk management strategies and policies but also risk disclosure decisions. In terms of this latter point, the relevant previous studies that examined the relationship between disclosure and firm value have been discussed and presented in this chapter. This literature provides mixed results and suggests the need for further research.

CHAPTER 3

RESEARCH DESIGN AND METHOD

3.1 INTRODUCTION

There are two main objectives of this chapter. The first objective is to explain the empirical schema of the study and develop testable hypotheses in relation to corporate risk disclosure, based on arguments and findings identified in the preceding chapter. The second objective is to explain the process of how the sample is gathered and the data is measured and analysed in the study to test the hypotheses developed. To meet this second objective, the study uses a content analysis approach to extracting and categorizing secondary data available from corporate annual reports.

Based on the review of prior literature in the preceding chapter, Section 3.2 presents and discusses the conceptual framework of the study. Following the conceptual framework, the relevant hypotheses are then developed. Section 3.3 discusses the arguments behind the development of each specific hypothesis. This section is divided into two parts, namely determinants of corporate risk disclosure and value relevance of corporate risk disclosure. Section 3.4 presents how samples are selected in the study. Section 3.5 provides an explanation of the measures used for the dependent variable followed by an explanation of the measures used for independent variables and control variables in Section 3.6. Section 3.7 provides an explanation of the statistical analysis used in order to test the hypotheses proposed in the study. The chapter ends in Section 3.8 with a summary and conclusions.

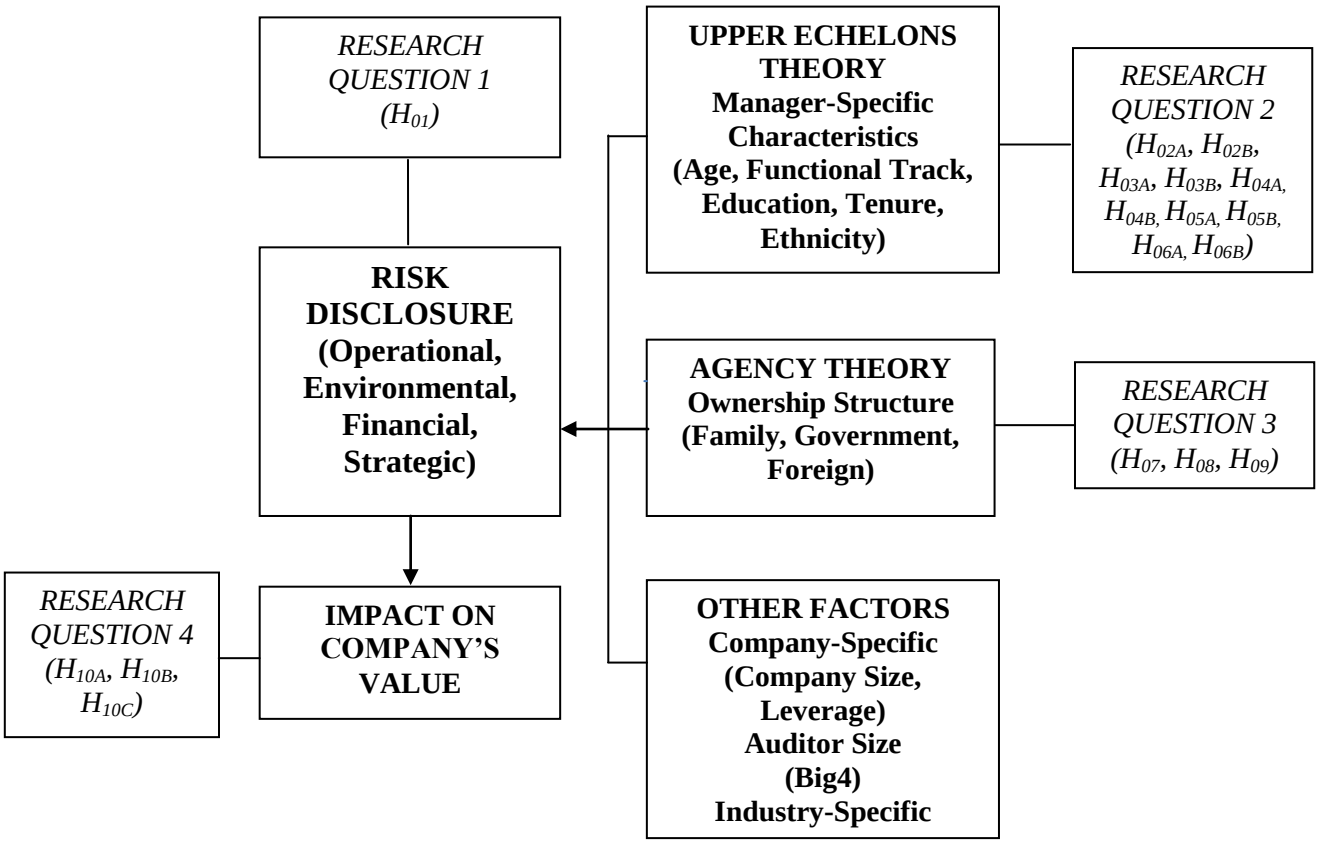
3.2 EMPIRICAL SCHEMA

To recap, the objective of this study is to determine whether upper echelons' cognitive characteristics underlying observable characteristics of top management and external agency features of ownership structures, have an influence on corporate risk disclosure and, in turn, whether this disclosure has value-relevance in the share market in Malaysia. Figure 3.1 gives a diagrammatic representation of the empirical schema on which this empirical study is designed. This schema depicts the relationships between

the theories, variables, research questions and hypotheses of this study. It presents a picture of the influence of management and shareholders on the extent of corporate disclosure of various categories of risk. It categorizes factors influencing the level of risk disclosures into three perspectives: upper echelons perspective, agency (ownership) perspective and other (context-specific) perspectives. Under these respective perspectives, this study examines the relationship between the manager-specific characteristics (age, functional track, education, tenure and ethnicity), ownership structures (family ownership, government ownership and foreign ownership), other factors (company size, leverage, auditor size and industry classifications) and corporate risk disclosure.

Figure 3.1:

Empirical Schema of Study



The first box in column 3 invokes the upper echelons theoretical perspective. This perspective uses manager-specific characteristics to provide evidence of cognitive characteristics underlying observable demographic measures of powerful management players. These cognitive characteristics could affect the company's decisions on risk

reporting disclosure. Two of the most powerful management players in risk reporting decision-making are expected to be the Chief Executive Officer (CEO) and the Chair of Audit Committee (CAC). In this study, two possible dimensions of cognitive characteristics that underlie the risk disclosure thinking of the CEO and CAC, as noted in psychology and behavioural decision making literatures, are risk attitudes and confidence. Risk attitudes and confidence clearly matter in corporate risk disclosure choices involving decisions about whether or not to disclose risk information in times of greater uncertainty. Such greater uncertainty is built into the context of this study by sampling 2009 data – a time of heightened volatility in capital markets due to the global financial crisis. Therefore, it is expected that a risk-averse management, led by the CEO and CAC, will seek to make less corporate risk disclosure than a risk-seeking management. Risk-averse managers can be defined in terms of the extent to which managers dislike risk and are willing to avoid it. Confidence on the other hand, refers to a person's 'trustworthiness' and 'assuredness' about his/her own ability and knowledge (Reber *et al*., 2009). Though in psychology, people are relatively overconfident when they overestimate the accuracy and believing their own knowledge to be more effective than it is in reality (Reber *et al*., 2009); there is still considerable logical variation across individuals in the level of overconfidence. An overconfident or aggressive CEO and CAC may make more risk disclosure because he/she overestimates his/her aptitude to confront potential future reversals reflected in the disclosure of risk information of the company. Thus, it is expected that a more overconfident or aggressive CEO or CAC is likely to make more risk disclosure than a less overconfident or conservative CEO or CAC.

The second box in column 3 invokes agency theory in terms of the relationship between owners and managers. As corporate disclosure varies across institutional environments and reflects differences in ownership patterns, this study also includes the ownership structure of companies in its empirical schema. Ownership structure can reflect institutional characteristics of governance and provide evidence of the strength of the principal's (controlling shareholders) influence on the monitoring role of agents (management and auditors) in corporate governance systems which could affect the company's reporting of risk. The motives and traditions of the controlling shareholders can differ depending on whether they are family-based shareholders, government-based shareholders or foreign shareholders.

The third box in column 3 depicts context-specific variables and that will be treated as control variables in this study. Based on prior studies, context-specific factors are included as they have been shown to have an impact on corporate risk disclosure (Linsley and Shrives, 2006; Oliveira *et al.*, 2006). These factors can include company size and leverage, auditor size and industry classification.

Finally, the third box in column 2 refers to the impact of risk disclosure on the firm's value. Corporate disclosure generally involves benefits and costs. However, the extent to which increased disclosure benefits companies (e.g. reduced information asymmetry, can improve company value to shareholders) depends on the degree of relevance of this external disclosure. Since managers have incentives to make self-serving voluntary disclosure, it is unclear whether capital markets treat such additional disclosure as having value relevance (Healy and Palepu, 2001). Ismail *et al*. (2012) find partial support for the relationship between corporate risk disclosure and the firm's market value using pre global financial crisis data. Therefore, this study will examine the impact of corporate risk disclosure on the company's market value as a test of the value relevance of the risk information disclosed to investors and securities analysts.

3.3 HYPOTHESES DEVELOPMENT

3.3.1 Determinants of Corporate Risk Disclosure

3.3.1.1 Manager-Specific Characteristics

3.3.1.1.1 Age

Upper echelons theory suggests that a manager's age can affect his/her values, cognitive styles and thus his/her decisions (Hambrick and Mason, 1984). Psychology and finance research has found that risk aversion (regarding investment in risky assets) appears to increase with age (e.g., Palsson, 1996). In other words, older managers are expected to be less aggressive in their accounting choices relative to younger managers. There are three likely explanations. First, older managers are already established and obtain their place in society and this advantage will therefore make them continue to choose a strategy that helps them maintain this position. Younger managers on the other hand, it is contended, prefer risky strategies that will induce more benefits in terms of making their mark with the public. Second, older managers have greater

psychological commitment to the organizational status quo (Child, 1974). Third, older managers 'may be at a point in their lives at which financial security and career security are important' (Hambrick and Mason, 1984, p. 198). Therefore, any risky actions that might disrupt their positions are generally avoided (Carlsson and Karlsson, 1970).

The association between the age of top executives and organizational characteristics has yielded consistent results: managerial youth is associated with corporate growth (Child, 1974) and with the volatility of profitability (Hart and Mellons, 1970). An empirical study by Palsson (1996) finds that age is associated with greater risk aversion in portfolio holdings. Bertrand and Schoar (2003) reported that older managers choose lower levels of corporate expenditures, lower leverage and larger cash holdings, consistent with conservatism. Since risk disclosure is a costly undertaking, these arguments suggest that older CEOs and CACs may develop more conservative and risk averse disclosure for fear such disclosures may prove inaccuracy.

Therefore, the study proposes the following hypotheses:

H_{02A}: There is an inverse relationship between the age of CEO and corporate risk disclosure.

H_{02B}: There is an inverse relationship between the age of CAC and corporate risk disclosure.

3.3.1.1.2 Functional Track

Hambrick and Mason's (1984, p. 200) upper echelons theory suggests a manager's primary functional track affects his/her choices because 'career experiences partially shape the lenses through which they view current strategic opportunities and problems.' In other words, managers adopt strategies that fit their personal and hands-on experience. Hambrick and Mason (1984) classified functional track into 'output functions' and 'throughput functions'. Output functions are functions such as marketing, sales and research and development (R&D). Throughput functions are functions such as production, process engineering and accounting. In this study, the categorisations of each function are broader with the inclusion of other related items as explained in the preceding chapter (refer to Chapter 2).

As the output function is often associated with risk and uncertainty, it may be concluded that output managers are more aggressive risk-takers than throughput managers. Gupta (1984) argue that entrepreneur with output functions are likely better to deal with an uncontrolled environment and uncertainty than those with other types of functions. In relation to this study, these output types of managers are expected to disclose more risk information. Managers with a throughput background and work function may adopt a conservative disclosure stance as they are considered less tolerant of ambiguity (Holland, 1997). In a similar vein, Bamber *et al.* (2010) who studied voluntary earnings-related disclosure found that disclosure styles of managers promote from accounting and finance disciplines are associated with fewer but more precise disclosures. This is deemed to reflect the element of conservatism. Since corporate risk disclosure is a complex task which has an impact on the entire organization, throughput function-experienced CEOs and CACs are not expected to disclose more risk information.

Therefore, the study proposes the following hypotheses:

H_{03A}: There is an inverse relationship between the CEO background in throughput functions and corporate risk disclosure.

H_{03B}: There is an inverse relationship between the CAC background in throughput functions and corporate risk disclosure.

3.3.1.1.3 Education

Another key demographic determinant of disclosure practice is educational background. To some degree, education indicates a person's knowledge and skill base. Hambrick and Mason (1984) find that a manager is likely to adopt innovative activities and lean more towards risk-taking tendencies if he/she is more educated. With respect to educational background, this study will examine whether managers have a professional accounting qualification and/or Master of Business Administration (MBA). One of these two particular educational achievements is likely common during the career path of a top management position and is potentially associated with risk attitudes. In this study, the two career paths that have been envisage are: i) those who have professional qualifications in accounting for example (to name a few) member of Malaysian Institute of Accountants (MIA), member of Association of Chartered Accountants, member of the Association of Chartered Certified Accountant (ACCA)

and member of the Malaysian Institute of Certified Public Accountants (MICPA) that eventually hold the CEO or CAC position; and ii) those who obtain an MBA qualifications that eventually leads to the CEO or CAC position. It is expected that top management with professional accounting qualifications or MBA qualifications will have better knowledge of professional ethics (Ge *et al.,* 2009) therefore will appropriately be mattered with transparency and be inclined to support more disclosure of corporate risk information.

Empirical studies using managers education (i.e. MBA qualification) as a determinant have found that mutual fund managers who have an MBA take more risk through holding portfolios with higher systematic risk (Chevalier and Ellison, 1999) and managers with MBAs make more aggressive resource allocation decisions (Bertrand and Schoar, 2003). Assuming the disclosure of risk information may bring uncertainties to the firm, the CEO and CAC of a firm would have capabilities to evaluate prospective risk disclosure and to assume varying degrees of uncertainties depending on their educational background.

Therefore, the study proposes the following hypotheses:

H_{04A}: There is a positive relationship between the CEO holding a professional accounting qualification and/or a Master of Business Administration (MBA) and corporate risk disclosure.

H_{04B}: There is a positive relationship between the CAC holding a professional accounting qualification and/or a Master of Business Administration (MBA) and corporate risk disclosure.

3.3.1.1.4 Tenure

According to Simsek (2007), long-tenured CEO is considered as an expert and is observed to have deeper knowledge of the firm's environment which depends on the extent to which the CEO has been integrated into the contacts of key stakeholders' network. Moreover, with a long tenure, it helps and enables the CEO to support risky initiatives, therefore, better influence the disclosure of risk information. Shorter-tenured CEOs on the other hand are noted to evaluate risk disclosure ineffectively because of lack of sufficient firm-specific knowledge (Simsek, 2007).

Hambrick and Fukutomi's (1991) integrative model suggests that long-tenured CEOs become devoted to their paradigm and avoid information that disconfirms this paradigm. Because of reluctance to change behaviour, long-tenured CEOs can be expected to commit to the status quo. Based on Miller and Shamsie (2001), Simsek (2007) additionally suggests that long tenures may give rise to risk avoidance and aversion. As a result, long-tenured CEOs and CACs will disclose less risk information. Short-tenured managers on the other hand may choose a more risky strategy in order to build up the relationship with shareholders.

Although there are counter arguments about the direction of the relationship between length of tenure and risk disclosure, the study proposes the following hypotheses:

H_{05A}: There is an inverse relationship between the tenure of CEO and corporate risk disclosure.

H_{05B}: There is an inverse relationship between the tenure of CAC and corporate risk disclosure.

3.3.1.1.5 Ethnicity

Upper echelons theory suggests that socio-economic background of senior executives can affect their decisions. In multiracial countries like Malaysia, Haniffa and Cooke (2002) argue that it is important to acknowledge the social values when each of the racial groups has chosen to maintain its own ethnic identity and value. A multiracial society in Malaysia comprises of two main groups, i.e. Malay and Chinese. While Malays form the majority ethnic group, the Chinese have always been the most economically prominent in Malaysia (which is in the higher socio-economic group). Beside these two main ethnic groups, there are other minority ethnic group in Malaysia i.e. Indian.

Therefore, socio-economic background in this study is referring to the ethnic group i.e. Malay (Bumiputera), Chinese and Indian. In addition, this study also includes non-Malaysians to reflect the position of a CEO and CAC in which they are sometimes being held by foreigners especially in the foreign-owned companies. Studies by Haniffa and Cooke (2002, 2005) reported that Malay-dominated boards are positively related to voluntary disclosure and corporate social disclosure in Malaysia. They suggest that Bumiputera firms use voluntary and corporate social disclosures as legitimating

strategy to compel various interest groups, including ensuring a continued influential voice at both institutional and government levels. Yatim *et al.* (2006) document evidence that Bumiputera-controlled firms practice favourable corporate governance practices relative to their non-Bumiputera counterparts. In relation to this study, no other study in the Malaysian context has tested the influence of ethnic domination on corporate risk disclosure.

Based on the above discussion, the study proposes the following hypotheses:

H_{06A}: There is a positive relationship between the Bumiputera ethnicity of CEO and corporate risk disclosure.

H_{06B}: There is a positive relationship between the Bumiputera ethnicity of CAC and corporate risk disclosure.

3.3.1.2 Ownership Characteristic

3.3.1.2.1 Family Ownership

In a study on ownership around the world, La Porta *et al.* (1999) document that family shareholdings are rather rare in the US and the UK, nonetheless family-controlled firms are often form part in Asian region. For both small and established firms in Asia in which mostly controlled by family members are known as family firms (Mak and Kusnadi, 2005). A high proportion of family members on the board may indicate the existence of a dominant group that could strongly influence the board's decision (Mohd Ghazali and Weetman, 2006). They also suggest that with substantial ownership, these family-controlled firms are able to nominate family members to sit on the board so as to protect their interests.

Over the long-term period, family owners may obtain several advantages as compared to other type of shareholders. First, Chen *et al.* (2008) argue that family owners may have a longer investment horizon. After considering existing studies (e.g. Kasznik, 1999; McNichols and Trueman, 1994), Chen *et al.* (2008, p.505) conclude that '...founding families, with longer investment horizons, likely face more potential costs than benefits from disclosure of timely information...', therefore, they prefer less disclosure. This view has also been supported by Choi *et al.* (2007, p.953) who argue that '...despite initial entrepreneurial contributions of the founders, it appears that continuing to keep the firm ownership and management as family affairs has more costs

than benefits'. They find a negative and significant effect of family holdings on firm performance. Second, Chen *et al.* (2008) also argue that family owners are usually more actively involved in firm management by serving as executives and/or directors. Thus, family owners have better monitoring of management since they have better access to information, which lead to lower disclosure to public. Similarly, a study by Bartholomeusz and Tanewski (2006) suggest that family firms create agency costs in corporate governance structures in a manner that the structures are inconsistent with maximizing the company's value. While Bartholomeusz and Tanewski (2006) suggest that family firms reduce agency costs to the owners through less separation from management, they also create agency costs to the equity market by expropriating from the firm for private benefit.

Studies by Haniffa and Cooke (2002) and Mohd Ghazali and Weetman (2006) report a negative significant coefficient between the proportion of family members on the board and the extent of voluntary disclosures in the annual report of Malaysian companies. Ho and Wong (2001) also find the same results for Hong Kong listed companies. In relation to risk reporting practices, a recent study by Arshad *et al* (2012) concludes an insignificant influence of family ownership companies in Malaysia. Up till now, there are relatively limited studies from Malaysia that examine the relationship between family ownership and corporate risk disclosure. Earlier studies (e.g. Chau and Gray, 2002; Wallace and Naser, 1995) advocate that closely held and controlled companies are less likely to provide extensive information in annual reports. In comparison to companies with diffused ownership, family-controlled firms are likely to be less motivated or have less incentive to voluntarily disclose proprietary information. Given the lower degree of conflict of interest with the fact that many family members sit on the board, there would be less prerequisite for voluntary disclosure as they have high access to inside information. Hence, this would be a stepping stone to study their influence in relation to corporate risk disclosure.

Accordingly, the study proposes the following hypothesis:

H_{07}: There is an inverse relationship between the degree of family ownership and corporate risk disclosure.

3.3.1.2.2 Government Ownership

Government ownership of shares is a particular feature of Malaysian companies, largely where the government retains shares in privatized companies. Given government is relatively influential in nature; it has considerable power to monitor the managers of government-owned companies more closely than shareholders of diffusely held private corporations (Dewenter and Malatesta, 2001). Mohd Ghazali and Weetman (2006) and Mohd Ghazali (2007) explain that ownership by government institutions or government-controlled bodies may create some kind of pressure for companies to disclose additional information because the government is accountable to the public at large. In other words, this government ownership might provide a control mechanism that can actually perform as a substitute for effective corporate governance (Chalmers and Godfrey, 2004).

The control mechanism by government again, could help in disciplining management's self-interest behavior to be more in line with their company's objectives. Eng and Mak (2003) argued that agency costs are higher in government-linked companies (GLCs) because of conflicting objectives between the goals of pure profit and the interests of the state. They find that, because of these conflicting objectives and the government's vested interests in these companies, the must for disclosure to mitigate these problems is greater. In a similar vein, studies by Mohd Ghazali (2007) and Said *et al* (2009) show that Malaysian companies disclose more corporate social responsibility in their annual reports when shares are owned by government agencies. In other words, the presence of government may force management's tendency to disclose information. Cheng and Courtenay (2006) suggest that government-owned corporations may disclose more to reflect the state's commitment to transparency and corporate governance reform. Hence, there may be greater disclosure for the government-owned companies than non-government-owned companies.

Therefore, the study proposes the following hypothesis:

H_{08}: There is a positive relationship between the degree of government ownership and corporate risk disclosure.

3.3.1.2.3 Foreign Ownership

Agency theory (Fama and Jensen, 1983) suggests that as the number of shareholders increases and ownership becomes more dispersed, monitoring costs will increase. Additionally, foreign ownership could mitigate agency problems through incentives that align the interests of managers and investors (Hingorani *et al.,* 1997).

Prior studies show that there is a positive association between foreign listing status and the extent of voluntary disclosure. For example, Meek and Gray (1989) find that continental European multinational corporations listed on the London Stock Exchange voluntarily disclose information in excess of what was required under London Stock Exchange rules. Likewise, Hossain *et al.* (1994) documented the evidence that Malaysian multinationals listed on London Stock Exchange voluntarily disclose more information in their annual reports than companies listed only on local stock exchanges. Ferguson *et al.* (2002) report that Chinese firms quoted on several stock exchanges make more information disclosure. Equally, previous studies by Singhvi (1968) and Xiao *et al.* (2004) find that majority ownership by foreigners encourages information disclosure in India and China, respectively. In the Malaysian setting, Haniffa and Cooke (2002) find a significant positive relationship between the proportion of foreign ownership and the level of voluntary disclosure.

Given the geographical separation of owners and management, company management may be inclined to voluntarily provide more information in annual reports (Barako *et al.*, 2006). Besides, the presence of foreign ownership as part of the control mechanism hopefully can add value to firm risk disclosure as evidenced by previous researchers in related disclosure studies (Schipper, 1981; Bradbury, 1992; Craswell and Taylor. 1992). This is because the high proportion of shares held by foreign-owned firms will increase pressure on local firms to have good corporate disclosure. Higher disclosure should also be expected as substantial funding in the Malaysian capital market comes from foreign investors. Thus, ownership by foreigners can be a significant determinant of the level of corporate risk disclosure.

Therefore, the study proposes the following hypothesis:

H_{09}: There is a positive relationship between the degree of foreign ownership and the corporate risk disclosure.

3.3.2 Value Relevance of Total Risk Disclosure

Ball and Brown (1968) evaluated the informativeness of accounting numbers by looking at stock market reaction to the release of accounting data. As explained in the previous chapter, there has been a plethora of studies examining the association of financial reporting disclosure with equity values that either enhance or detract from this association which is referred to in the literature as value relevance.

This study particularly focuses on the value relevance of information contained in corporate risk disclosure on a firm's value in the Malaysian capital market. In the context of broader corporate disclosure, a study by Hassan *et al.* (2009) found that mandatory disclosure has a highly significant but negative relationship with firm value while voluntary disclosure has a positive but insignificant association with firm value. Focusing on the corporate risk disclosure only, a study by Ismail *et al.* (2012) found that the quantity of voluntary risk disclosure is positively significant to the firm's market value, while quality of voluntary risk disclosure is negatively significant in its relation to firm market value. However, there is still a limited understanding of whether the types of corporate risk disclosure, namely regulated risk disclosure and non-regulated risk disclosure affect the market value of the firm. It is considered that, if the market (i.e. investors) places value on the types of corporate risk disclosure of a firm, then the value of the firm will increase. Hence, corporate risk disclosure should be significantly and positively related to the firm's market value.

Therefore, the hypotheses of this study are that:

H_{10A}: Total risk disclosure is positively related to the firm's market value.

H_{10B}: Regulated risk disclosure is positively related to the firm's market value.

H_{10C}: Non-regulated risk disclosure is positively related to the firm's market value.

3.4 SAMPLE SELECTION

The initial sample of the study consists of the 200 top listed companies based on market capitalization listed on the Main Board of Bursa Malaysia for the year 2009. This year has been chosen for the following reasons. First, 2009 follows an episode of significant

stock market decline and economic instability, therefore may coincide with listed firms placing greater importance on their decisions about risk disclosure. Second, a sample drawn in 2009 provides an update for comparison with prior findings on risk disclosure by Malaysian public listed companies from studies undertaken in the Malaysian context for the years 2005 till 2008 (Amran *et al*., 2009; Ismail and Abdul Rahman, 2011). As evidenced by previous literature, this study chooses large companies because they are more likely to disclose risk information (e.g., Deumes and Knechel, 2008; Abraham and Cox, 2007; Linsley and Shrives, 2006; Beretta and Bozzolan, 2004). These literatures have observed a positive association between risk disclosure level and firm size. In Malaysia, licensed institutions such as commercial banks, finance companies, merchant banks and money brokers are regulated under the Banking and Financial Institutions Act (BAFIA), 1989. Due to different statutory requirements and materially different types of operations, all banks, insurance and unit trust companies were excluded from the population of interest (Mohd Ghazali and Weetman, 2006; Hanniffa and Cooke, 2002). After eliminating 21 financial companies, the sample size was reduced to 179 non-financial companies (Table 3.1).

The data collected for this study comprises two categories: dependent and independent variables. The first dependent variable is corporate risk disclosure[23] measured using the content analysis method. This corporate risk disclosure will be used as an independent variable later to measure its value relevance to investors. The second dependent variable is share prices[24] measured based on the share price of companies for the year ended 2009. The independent variables consist of manager-specific characteristics, ownership characteristics, book value of net assets and earnings per share. Corporate risk disclosure data has been collected from the sampled companies' annual reports. Information pertaining to manager-specific characteristics and ownership characteristics has been manually-collected by examining the disclosures made in annual reports available on the Bursa Malaysia website (www.bursamalaysia.com). Information pertaining to financial data has been collected from the *OSIRIS* database and annual reports.

[23] This dependent variable (risk disclosure) will be used for hypotheses one until nine in this study.

[24] This dependent variable (share price) will be used for hypothesis ten in this study.

Table 3.1:

Derivation of Sample

	TOTAL
Bursa Malaysia Top Public Listed Companies by Market Capitalization, 2009	200
Less:	
Banks, insurance and unit trust	21
	179
Less:	
Companies with incomplete data (unavailable 2009 annual report and unavailable manager-specific and financial data)	51
Final sample	**128**

Further, 51 companies have been excluded as the required manager-specific and financial data was not available, resulting in a final sample of 128 non-financial companies listed on seven sectors[25] of Bursa Malaysia's Main Board in 2009. Therefore, the final sample with complete data for corporate risk disclosure, manager-specific characteristics and ownership characteristics was 128 firm observations. The total sample of 128 in this study is considered reasonable as a similar study of this nature was conducted with a sample of 87 (Mohd Ghazali and Weetman, 2006) and 100 (Amran *et al.*, 2009).

Besides, disclosure is also industry-specific (e.g., Haniffa and Cooke, 2005). Manufacturing companies disclose more information than non-manufacturing firms (e.g., Cooke, 1992; Raffournier, 1995). The sample in this study (Table 3.2) will cover different industries, thus this will lessen the negative effect of the size on the sample selection. Different industries are likely to display different pattern of disclosure. Therefore this would allow for comparison between industries (Amran *et al.*, 2009).

[25] There are 13 sectors quoted on the main board of Bursa Malaysia (i.e. industrial sector, consumer sector, trading/services sector, construction sector, plantations sector, finance sector, infrastructure project companies (IPC) sector, hotels sector, properties sector, mining sector, technology sector, closed end fund sector, reits sector).

Table 3.2:

Industry Representation of the Sample Companies

	NUMBER OF COMPANIES	%
Trading/Services	42	32.8
Industrial product	34	26.6
Consumer product	26	20.3
Construction	9	7.0
Properties	7	5.5
Plantations	6	4.7
Infrastructure and Technology	4	3.1
Total	**128**	**100.0**

In the social science research, there are two different approaches that can be undertaken to resolving empirical research problems – the qualitative approach and the quantitative approach. As far as this study is concerned, the latter approach (which is under the mainstream research model for accounting disclosure) is used with regards of the research questions being addressed to achieve the findings. In this thesis, the subject of the research is the determinants of company annual report disclosure content; hence, this is 'primary data' research in that it directly employs the materials from company annual reports. Companies' annual reports are sourced and analysed to measure corporate risk disclosure. Other than corporate risk disclosure, data in this study is secondary in nature collected from corporate annual reports and financial databases. In the mainstream accounting research, the data collection will be highly structured and will be analyzed by mathematical and statistical technique (Chua, 1986).

3.5 MEASUREMENT OF THE DEPENDENT VARIABLES

This section gives a measurement of dependent variables used in both of the regression models (i.e. determinants of risk disclosure and value relevance of risk disclosure). First, risk disclosure is used as dependent variables to test hypotheses one to nine. Second, share price is used as a dependent variable to test hypothesis ten.

3.5.1 Risk Disclosure

Empirical research on disclosure chooses between two alternatives paths, namely disclosure indices and frequency of risk items' occurrence. This is more widely and popularly known as content analysis approach. Some prior studies that have used disclosure indices to measure the extent and quality of information disclosed by firms are, to name a few, Branco and Rodrigues (2008), Kent and Ung (2003), Botosan (1997) and Meek *et al.* (1995). Two procedures basically involves in the construction of a disclosure index: (i) the selection of a number of information items, and (ii) to choose between different approaches available in the literature, in which the most commonly used method to score items are weighted or an unweighted approach. The weighted approach applies a weighted disclosure index rated by a researcher using a pre-determined disclosure items based on their degree of importance. The unweighted approach, on the other hand, uses a dichotomous procedure in which an item scores 1 if it is disclosed and 0 if it is not. Though weighted approach is more systematic than unweighted approach, both approaches have limitations. The weighted approach, for example, requires subjective judgment by a researcher in its construction, in which it cannot be totally removed (Marston and Shrives, 1991) while the unweighted approach clearly assumes that all disclosure information items are useful to all users of annual reports, therefore, all information are considered equally important. However, the relevance of disclosure information is harder to define, as different potential users of annual reports may have enormously different interests.

Instead of using indices, this study will use the other approach which is frequency of risk items' occurrence. This approach has been widely used in accounting disclosure literature (e.g., Milne and Adler, 1999; Beretta and Bozolan, 2004; Lajili and Zegal, 2005; Linsley and Shrives, 2005, 2006; Abraham and Cox, 2007; Deumes, 2008). Generally, this approach is suitable in this study as a means to collect observed data to test research questions and objectives so as to capture the volume of risk disclosures in corporate annual reports (Lajili and Zeghal, 2005). Moreover, the application of contents analysis in this study is a tool that supports the understanding of the type of risk disclosure information that Malaysian companies are disclosing in their annual reports.

Content analysis is a method where documents and texts (printed or visual) are collected and gathered to seek their contents and reduced the information collected to the pre-defined or pre-determined categories with a systematic and replicable manner (Bryman, 2012; Bryman and Bell, 2011). Probably a well-known definition is the one provided by Holsti (1969) as 'a research technique for making inferences by objectively and systematically identifying specified characteristics of message'. Weber (1990) describes content analysis as 'a method of codifying and categorising the qualitative and quantitative information (text or content) of a piece of writing into various groups or categories depending on selected criteria.' Guthrie *et al*. (2004) describe it as a method that aims to capture and organize assorted empirical data which is important so as to develop the patterns in the presentation and reporting of information. In other words, content analysis seeks to analyse published information objectively, reliably and systematically (Guthrie *et al.,* 2004). Content analysis codes the text (which is measured by word or sentences or any other units of measurement) and assumes that frequency indicates importance of the subject matter (Krippendorff, 2013; Weber, 1990).

It is striking that the above definitions contain some qualities including objectivity and being systematic. Objectivity is attained when certain rules are clearly specified before assigning the content (text) to categories. This measure allows transparency in the procedures; hence it is more likely to reduce the analyst's personal biases to as little as possible. The quality of being systematic means that the application of the rules is undertaken in a consistent manner so that bias is curbed (Bryman, 2012). As a result of these two qualities, anyone else repeating the analysis (following certain rules) would categorize the text in the same way.

A further fundamental component of content analysis is the selection of a 'unit of analysis'. This selection needs to be carefully and thoroughly considered as it will ascertain 'how' to capture the data (i.e. risk disclosure) in the annual report. In the accounting literature, there is a debate about the unit of analysis (i.e. the amount of disclosure) that should be used in content analysis (Gray *et al*., 1995). A number of units of analysis are employed in the accounting disclosure literature including: words (e.g., Deegan and Gordon, 1996); sentences (Milne and Adler, 1999; Beretta and Bozzolan, 2004; Linsley and Shrives, 2006; Abraham and Cox, 2007); pages and

proportions of a page (Guthrie and Parker, 1990; Unerman, 2000; Dunne *et al.*, 2007); frequency (e.g., Cowen *et al.*, 1987) and high/low disclosure (Patten, 1991).

According to Gray *et al.* (1995), words, sentences as well as pages are likely to be the most favoured and common unit of analysis in the literature. These measures are able to generate volumetric measure of disclosure volume. Gray *et al.* (1995) argue that words are basically have the advantage of lending themselves to more exclusive analysis (i.e. easily categorized), sentences are to be preferred if the researcher is seeking to infer meaning while pages tend to reflect the amount of total space given to a topic and, by inference, the importance of that topic. Milne and Adler (1999) and Linsley and Shrives (2006), on the other hand, chose sentences because these are far more reliable than any other unit of analysis. They argue that, a single word has no meaning to provide a basis for coding disclosures, rather, to look at an individual word within a sentence which provides a proper context in order to achieve reliable results.

For the purpose of this study, the amount of disclosure chosen to analyse the content of risk disclosure in annual reports is sentence count. This is in line with previous related risk disclosure studies (Beretta and Bozzolan, 2004; Linsley and Shrives, 2005, 2006; Abraham and Cox, 2007). Moreover, this approach is chosen based on its objective measure and perceived high degree of accuracy in the underlying quantification of the risk items provided in annual reports. Since this study does not intend to determine the quality of risk disclosure, using sentences as coding scheme is likely to provide complete, reliable and meaningful data for further analysis (Milne and Adler, 1999; Linsley and Shrives, 2006).

In addition, to minimize subjective judgement and inconsistency effect in computing the text of risk disclosure, specific keywords are pre-defined. Annual reports are viewed through a portable document format (PDF) and details of keywords which are listed in Table 3.3 are searched.

Table 3.3:

List of keywords

BASIC KEYWORD: RISK	
Other Risk Keywords	
Firm's Expected Future Impacts	Firm's Current Vulnerability To Impact
Outlook	Hazard
Prospect	Danger
Opportunity	Harm
Uncertainty	Threat
	Exposure
	Loss
	Uncertainty

A worksheet based on the risk category is developed to capture what risk information has been disclosed and the volume of the risk information disclosed are reviewed and classified according to the types of risks (operational, environmental, financial and strategic risks) for each firm. In particular, sentences in which the keywords appeared are read and marked on the worksheet based on the number of sentences in the relevant risk category. The researcher independently coded an initial sample of ten largest annual reports and the results of this pre-testing were used to create decision rules (appendix A). The number of sentences was then added together to compute the disclosure scores for a firm and the industry. This study is focusing on all narrative sections (e.g., chairman statement, statement on corporate governance, statement on internal control and operations review) including the notes to the accounts.

Risk has both downside and upside (opportunities) components. Therefore, in addition to controlling the firm's current vulnerability to the effects of downside risks, firms should be able to take advantage of the potential upside risk in the future. In examining Malaysian risk disclosures in this study, the evidence (if any) of the existence of upside and downside risk disclosures that are most commonly reported by firms using the keywords are drawn from the definition of risk disclosure by Linsley and Shrives (2006) (refer to Chapter 2). However, there are three additional keywords that have been added. First, a keyword 'uncertainty' is added because risk relates to the uncertainty of future outcomes (Lupton, 1999). Risk is also referring to the two-sided

definition which linked to the exposure to financial loss or opportunity (Dobler, 2008). Second, a keyword 'outlook' is added because it is the close synonym of the keyword 'prospect' that is used by companies particularly connected to environmental risk disclosure. Third, a keyword 'loss' is added because it is a close synonym to the keyword 'harm' and since 'harm' is not an accounting term, the use of 'loss' can be a substitute particularly in the area of financial risk. Other risk-related words such as jeopardy, peril, menace, endangerment and damage are not included in the lists because they were rarely appearing in the annual reports. The searches of these words which have been done in a small sample of the ten largest companies reveal that these words are hardly appeared. Therefore, by adding more words do not materially change the disclosure measures. Further, all pictures and images such as charts, diagrams and their captions are also excluded from the analysis to minimise the amount of subjectivity involved (Frost and Wilmshurst, 2000).

3.5.2 Share Price

Share price is the dependent variable in the value relevance regression model to test hypothesis ten. The share price is measured as the market price, obtained from *OSIRIS* database. The share price in this study is for the year 2009, calculated 180 days after the end of companies' accounting year.

3.6 MEASUREMENT OF INDEPENDENT VARIABLES

This section gives an operational definition of each independent variable identified in the hypotheses (i.e., determinants of corporate risk disclosure and value-relevance of corporate risk disclosure). The independent variables for the determinants of corporate risk disclosure are segregated into two major components: manager-specific characteristics and ownership characteristics. The summary of all the operational variables in this study is shown in Table 3.4.

Table 3.4:
Summary of the Operationalization of the Research Variables

Variables	Acronym	Operationalization
Dependent variables:		
Risk disclosure	RD	Total corporate risk disclosure sentences in the year 2009
Share price	SP	Market price (180 days after the end of a company's accounting year)
Independent variables:		
Age	AGE	Overall number of age (in years)
Functional track	FUNCTR	Dichotomous of 1 if managers rise from throughput function and 0 in output function
Education	EDU	Dichotomous of 1 if managers posses CPA and/or MBA, 0 otherwise
Tenure	TEN	Number of years the firm's current managers have held the position or the number of years the firm's current managers in the positions since their first appointment.
Ethnicity	ETHN	Dichotomous of 1 if the company has a Malay (Bumiputera) manager; 0 otherwise
Family ownership	FAMCTRL	The ratio of family members on the board to the total number of directors on the board of company
Government ownership	GOVOWN	The percentage of shares owned by the government institution listed in the top 30 shareholdings to total number of shares issued
Foreign ownership	FOROWN	The percentage of shares owned by the foreign investors listed in the top 30 shareholdings to total number of shares issued
Earnings per share	EPS	Earnings per share
Book value of net asset per share	BVNAS	Book Value of net assets divided by numbers of shares outstanding
Family-controlled firm	FAMCTRL_20	Family ownership of 20% or more
Government-controlled firm	GOVCTRL_20	Government ownership of 20% or more
Foreign-controlled firm	FORCTRL_20	Foreign ownership of 20% or more
Control variables:		
Company size	LNSIZE	Natural log of total assets
Leverage	LEV	The ratio of long-term debt to equity
Auditor size	BIG4	Dichotomous of 1 for firm that audited by Big 4, 0 otherwise
Industry classification: 1. Trading / Services 2. Construction 3. Consumer product 4. Industrial product 5. Plantation 6. Properties 7. Infrastructure and Technology	DUMMY INDUSTRY	Dichotomous of 1 if the firm is in trading and services sector, 0 otherwise; 2 if the firm is in the construction sector, 0 otherwise; 3 if the firm is in consumer product sector, 0 otherwise; 4 if the firm is in the industrial product sector, 0 otherwise; 5 if the firm is in plantation sector, 0 otherwise; 6 if the firm is in the properties sector, 0 otherwise; 7 if the firm is in infrastructure and technology sector, 0 otherwise.

3.6.1 Determinants of Corporate Risk Disclosure

3.6.1.1 Manager-Specific Characteristics

Age *(AGE)* is measured by the actual ages of CEO and CAC, expressed in years. This measurement is similar to the study by Ng and Sears (2012) and Barker and Mueller (2002).

Functional track *(FUNCTR)* is measured by distinguishing between a throughput function (accounting, finance, production, process engineering) and output function (sales, marketing, research and development) in the experiential background of the CEO and CAC of the firm (Hambrick and Mason, 1984). There are other items developed under each of the functional track in this study. The throughput function includes bureaucratic, internal organization role and widely-based enterprise while output functions include entrepreneurial, public/client engagement and industry-specific expertise. In this study, the variable takes a value of one if the CEO or CAC is from throughput functions; otherwise it takes a value of zero if the CEO or CAC is from output functions.

Education *(EDU)* is measured by the education level of CEO and CAC of the firm holding professional accounting qualifications (CPA) and/or Master of Business Administration (MBA). In this study, the variable takes a value of one if the CEO or CAC holds CPA and/or MBA; otherwise it takes a value of zero.

Tenure *(TEN)* is measured by the number of years the firm's current CEO and CAC have held the position or the number of years the firm's current CEO and CAC have been in the positions since their first appointment. This measurement is similar to the prior study by Barker and Mueller (2002) and Boeker (1997).

Ethnicity *(ETHN)* is measured by Bumiputera and non-Bumiputera CEO and CAC on the board. In this study, the variable takes a value of one if the CEO or CAC on the board is Malay (Bumiputera), otherwise it takes a value of zero.

3.6.1.2 Ownership Characteristics

Family ownership *(FAMCTRL)* is measured using the ratio of family members on the board to the total number of directors (Haniffa and Cooke, 2002 and Mohd Ghazali and Weetman, 2006; Arshad *et al.*, 2012). Family members are defined in accordance to Section 122A of the Malaysian Companies Act (1965). Each listed company in Malaysia is required to disclose the director's information in the annual report, including any family relationship with any directors and/or substantial shareholders of the company.

Government ownership *(GOVOWN)* is measured using percentages of shares owned by government ministries/agencies in the top 30 largest shareholdings to total number of shares issued (Arshad *et al.*, 2012; Najid and Abdul Rahman, 2011). While this definition has been used in other studies, it is not as broad as the definition of government ownership used in the study by Chu and Cheah (2004). They defined government-linked companies as (a) shares held by the Ministry of Finance's investment arm, which is Khazanah Holdings Berhad and State Agency, and (b) the government has a direct control for that particular company, that is the government has the ability to appoint board members, senior management and make major decisions (e.g., contract awards, strategy, restructuring and financing, acquisitions and divestments, etc).

Foreign ownership *(FOROWN)* is measured using percentages of shares owned by foreign shareholders in the top 30 largest shareholdings to total number of shares issued (Che Haat *et al*., 2008 and Barako *et al*., 2006). Foreign share ownership is defined as the percentages of shareholding owned by foreign portfolio equity investors as consistent with prior studies (e.g., Jiang and Kim, 2004; Lin and Shiu, 2003 and Dahlquist and Robertsson, 2001).

3.6.2 Value Relevance of Corporate Risk Disclosure

Earnings per share (*EPS*) are measured using annual income before extraordinary items divided by the number of outstanding ordinary shares.

Book value of net assets per share (*BVNAS*) is measured using (i) the book value of net assets (BVNA) by measuring the difference between total assets and total liabilities at the end of accounting year (ii) the BVNA which will be divided by number of issued ordinary shares outstanding at the end of accounting year.

Total Risk Disclosure (*TRD*) is measured by the total corporate risk disclosure sentences in the year 2009.

Regulated Risk Disclosure (*RRD*) is measured by the information of risk that has been mandated or regulated by the *Financial Reporting Standards*. Therefore, all Malaysian listed companies have to follow the standards and disclose the information accordingly.

Non-regulated risk disclosure (*NRRD*) is measured by the information of risk in which the management of the companies have some discretion in disclosing such information. There is no mandatory regulation for this type of disclosure; however, there are some guidelines for the Malaysian listed companies to follow in order to make the disclosure.

Family-Controlled Firms (*FAMCTRL_20*) is measured by the family members on board who hold 20 percent or more shares in the company.

Government-Controlled Firms (*GOVCTRL_20*) is measured by the government agencies which hold 20 percent or more shares in the company.

Foreign-Controlled Firms (*FORCTRL_20*) is measured by the foreigners who hold 20 percent or more shares in the company.

3.6.3 Control Variables

As with prior studies, this study includes company size, leverage, auditor size and industry classification as control variables in the regression model given the evidence of the association between these variables and corporate disclosure. Based on prior studies, these variables are shown to have an impact on corporate risk disclosure (Aljifri, 2008; Abraham and Cox, 2007; Linsley and Shrives, 2006; Oliveira *et al.*, 2006; Haniffa and Cooke, 2005; Raffournier, 1995; Hossain *et al*., 1994).

The natural log of total assets is included in the regression to control for the firm size effect (Hassan *et al*., 2008; Chalmers and Godfrey, 2004). Company size *(LNSIZE)* denotes the size of the company in terms of total assets. A larger firm size is expected to have better corporate disclosure as they are closely monitored by the external capital markets. A positive relationship between company size and corporate risk disclosure is predicted.

Leverage *(LEV)* is measured as the ratio of long-term debt to total equity and is used to control for the liquidity of the firm. Agency theory predicts that corporate disclosure is expected to increase with leverage. Also, highly geared firms have a wider obligation to necessarily satisfy the needs of their long-term creditors for information compared to lower geared firms. A study by Malone *et al.* (1993), Hossain *et al.* (1994) and Hossain *et al.* (1995) reports a positive significant association between leverage and disclosure.

Auditor size *(BIG4)* is measured by the Big Four audit firms. These large audit firms are expected to have a positive impact on risk disclosure as they have more expertise and resources as well as specialists and brand name (Balsam *et al.*, 2003) compared to smaller audit firms. *BIG4* is a dichotomous variable Big Four and non-Big Four. In this study, the variable takes a value of one if the company is audited by a Big4 firm; otherwise it takes a value of 0. This measurement is similar to the studies by Hassan *et al.* (2008), Deumes and Knechel (2008), Lopes and Rodrigues (2007), Oliveira *et al.* (2006), Chalmers and Godfrey (2004) and Haniffa and Cooke (2002).

Industry classification is measured as per Bursa Malaysia sector classifications: trading and services, construction, consumer product, industrial product, plantation, properties as well as infrastructure and technology. Each industry has its representatives in the sample to ensure the results represent overall industries practices in Malaysia. Thus, the final sample constitutes seven industries.

3.7 REGRESSION MODEL

3.7.1 Determinants of Risk Disclosure

This study uses a linear multiple regression analysis to deal with dependence of one variable (corporate risk disclosure) on other variables (manager-specific characteristics and ownership characteristics). It is to be noted that linear multiple regression is analysis that deals with dependence of one variable on other variables not strictly association and causation. Association between variables is inferred from reasoning underlying the hypotheses to be tested. Moreover, a common limitation of multiple regression models is lack of strict exogeneity of the predictor variables, or the right-hand side variables, from the dependent variable. All the data is analysed using the Statistical Package for Social Science (formerly SPSS and now known as PASW) version 18.0. The following multiple regression model is utilised to determine the extent of the influence of each of the variables in the study on the corporate risk disclosure:

$$RD_{jt} = \beta_0 + \beta_1 AGE\_CEO_{jt} + \beta_2 AGE\_CAC_{jt} + \beta_3 FUNCT\_CEO_{jt} + \beta_4 FUNCT\_CAC_{jt} + \beta_5 EDU\_CEO_{jt} + \beta_6 EDU\_CAC_{jt} + \beta_7 TEN\_CEO_{jt} + \beta_8 TEN\_CAC_{jt} + \beta_9 ETHN\_CEO_{jt} + \beta_{10} ETHN\_CAC_{jt} + \beta_{11} FAMCTRL_{jt} + \beta_{12} GOVOWN_{jt} + \beta_{13} FOROWN_{jt} + \beta_{14} LNSIZE_{jt} + \beta_{15} LEV_{jt} + \beta_{16} BIG4_{jt} + \beta_{17} DUMMY\ (INDUSTRY) + \varepsilon_{jt} \quad (3.1)$$

Where:

RD = Measured by total numbers of corporate risk disclosure sentences using content analysis

AGE_CEO = Overall number of CEOs age (in years)

AGE_CAC = Overall number of CACs age (in years)

FUNCT_CEO = Dummy variable, 1 if the CEOs are in throughput function, 0 if in output function.

FUNCT_CAC = Dummy variable, 1 if the CACs are in throughput function, 0 if in output function.

EDU_CEO = Dummy variable, 1 if the CEOs holding professional accounting qualifications (CPA) and/or Master of Business Administration (MBA), 0 otherwise.

EDU_CAC = Dummy variable, 1 if the CACs holding professional accounting qualifications (CPA) and/or Master of Business Administration (MBA), 0 otherwise.

TEN_CEO = Number of years the firm's current CEOs have held the position or the number of years the firm's current CEOs in the position since their first appointment.

TEN_CAC = Number of years the firm's current CACs have held the position or the number of years the firm's current CACs in the position since their first appointment.

ETHN_CEO = Dummy variable, 1 if the company has a Bumiputera CEOs; 0 otherwise. [26]

ETHN_CAC = Dummy variable, 1 if the company has a Bumiputera CACs, 0 otherwise.

FAMCTRL = Proportion of family members on the board to the total number of directors on the board of the company.

[26] The measures of ethnicity used in this study is a dichotomous variable set as 1 if a CEO or CAC is Bumiputeras, 0 if otherwise. The ethnicity of the CEO and CAC is determined by examining the names of the person. If the names are of Chinese origin, for example, having surnamed of Lee, Tan or Chan and the nationality is Malaysian, the criterion is satisfied, that is, the CEO or CAC is assumed to be Malaysian Chinese. A similar approach is also used for other Malaysian CEO and CAC who are non-Malay (i.e. Indian) and other ethnicities (i.e., foreign CEO and CAC). For Bumiputera (Malay) names, the same procedure is used.

GOVOWN = Percentage of shares held by government to total number of shares issued.

FOROWN = Percentage of shares held by foreign investors to total number of shares issued.

LNSIZE = Natural log of total assets.

LEV = Ratio of long-term debt to total equity.

BIG4 = Dummy variable, 1 if audited by Big 4 audit firms, 0 if otherwise.

INDUSTRY = Dummy variables of 1 if the firm is in trading /services sector, 0 otherwise; 2 if the firm is in the construction sector, 0 otherwise; 3 if the firm is in consumer product sector, 0 otherwise; 4 if the firm is in the industrial product sector, 0 otherwise; 5 if the firm is in plantation sector, 0 otherwise; 6 if the firm is in the properties sector, 0 otherwise; 7 if the firm is in infrastructure and technology sector, 0 otherwise.

ε = Error term

To test the hypotheses, multivariate regressions for each model are conducted for each type of risk disclosures as well as for the total risk disclosure. At first, the baseline model as proposed in equation 3.1 is regressed. Subsequently, a modified regression model, which is developed by amending the methodology of measuring certain variables, is tested. The reason for modifying the baseline model is to determine whether the earlier findings are significantly different when the methodology of measuring certain variables is altered, thus helping to determine the constancy of the findings.

3.7.2 Value Relevance of Risk Disclosure

Ohlson (1995) develops and analyses a model of a firm's market value as it relates to contemporaneous and future earnings, book values and dividends. Ohlson's (1995) value relevance model satisfies many appealing properties and this model is used as a benchmark in conceptualising how market value relates to accounting data and other information (i.e. corporate risk disclosure). Value relevance in this study, measured in terms of stock prices, refers to increases in firm value resulting from added risk disclosure by firms. Value relevance is an empirical operationalization of an accounting amount is considered value relevant, i.e., have a predicted significant relation with share prices, only if the amount reflects information relevant to investors in valuing the firm and is measured reliably enough to be reflected in share prices (Barth *et al.*, 2001). Therefore, a model is developed to test the value relevance of total risk disclosure in the share market. It depicts the results of the multiple regression analysis of total risk disclosure and firm value. The model tests whether investors perceive corporate risk disclosure as an important variable in the determination of the value of a company. In addition, β_1, β_2 and β_3 are the slope coefficients for earnings per share (EPS), book value of net assets per share (BVNAS) and total risk disclosure (TRD), respectively. If the investor places value on the EPS and BVNAS, then β_1 and β_2 should be positively related to a firm's share price. Likewise, if the investor places value on the corporate risk disclosure of a firm, then β_3 should be positively related to a firm's share price.

In addition, the model includes interaction of ownership control because the nature of ownership could affect the share price of a company (Lu *et al*., 2007; Lins, 2003; Lemmon and Lins, 2003). Hence, the difference in the market value of the test sample (ownership control) is captured by β_4, β_5 and B_6. If the total risk disclosures of the test sample firms are perceived as value relevance, the market value will be higher for those firms, which implies that the coefficient β_4, β_5 and β_6 will be positive. The test sample includes family-controlled firms, government-controlled firms and foreign-controlled firms when the equity ownership by those owners is 20 percent or more (see: La Porta *et al*., 1999). Therefore, the following model is developed:

$$SP_{jt} = \beta_0 + \beta_1 EPS_{jt} + \beta_2 BVNAS_{jt} + \beta_3 TRD_{jt} + \beta_4 TRD*FAMCTRL\_20_{jt} + \beta_5 TRD*GOVCTRL\_20_{jt} + \beta_6 TRD*FORCTRL\_20_{jt} + \varepsilon_{jt} \quad (3.2)$$

Where:

SP = Measured by the share prices, 180 days after the firm's financial year end.

EPS = Earnings per share (sen).

BVNAS = Ratio of book value of net assets per total shares outstanding.

TRD = Firm total risk disclosure score for the year 2009.

FAMCTRL_20 = Dummy variable, 1 if at least 20% ownership controlled by family, 0 otherwise.

GOVCTRL_20 = Dummy variable, 1 if at least 20% ownership controlled by government, 0 otherwise.

FORCTRL_20 = Dummy variable, 1 if at least 20% ownership controlled by foreigner, 0 otherwise.

ε = Error term

The analysis is based on data from 117 firms out of 128 firms because of missing data i.e., share prices and earnings per share. In addition, only total risk disclosure level is used in the regression since the individual risk disclosure types represent to some extent similar results. However, to reflect more robust results, this model will be segregated into two additional model which will examine the value relevance of regulated risk disclosure (RRD) and non-regulated risk disclosure (NRRD). Therefore, the equation in model 3.2 for the value relevance of total risk disclosure will then be segregated into the value relevance of regulated risk disclosure (RRD) (model 3.3) and non-regulated risk disclosure (NRRD) (model 3.4). The following models are then developed:

$$SP_{jt} = \beta_0 + \beta_1 EPS_{jt} + \beta_2 BVNAS_{jt} + \beta_3 RRD_{jt} + \beta_4 RRD*FAMCTRL\_20_{jt} + \beta_5 RRD*GOVCTRL\_20_{jt} + \beta_6 RRD*FORCTRL\_20_{jt} + \varepsilon_{jt} \quad (3.3)$$

$$SP_{jt} = \beta_0 + \beta_1 EPS_{jt} + \beta_2 BVNAS_{jt} + \beta_3 NRRD_{jt} + \beta_4 NRRD*FAMCTRL\_20_{jt} + \beta_5 NRRD*GOVCTRL\_20_{jt} + \beta_6 NRRD*FORCTRL\_20_{jt} + \varepsilon_{jt} \quad (3.4)$$

3.7.3 Adequacy of Sample Size for the Regression Models

The sample size used in a multiple regression has a direct effect on the appropriateness and determines the statistical power (R^2) of the model and the generalizability of the results. Since the sample size of this study is relatively small (a total of 128 annual reports collected from the Bursa Malaysia), the findings might be a concern when testing the variables using multiple regressions. According to Hair Jr. *et al.* (2010, p. 174), 'small sample usually characterized as having fewer than 30 observations, are appropriate only for analysis by simple regression with a single independent variable'. To test whether the sample size in this study has a direct and sizable impact on the statistical power (R^2), Table 3.5 is used.

Table 3.5:

Minimum R^2 that can be Found Statistically Significant with a Power of 0.80 for Varying Numbers of Independent Variables and Sample Sizes

	SIGNIFICANCE LEVEL (A) = 0.01 NO. OF INDEPENDENT VARIABLES				*SIGNIFICANCE LEVEL (A) = 0.05 NO. OF INDEPENDENT VARIABLES*			
Sample Size	2	5	10	20	2	5	10	20
20	45	56	71	NA	39	48	64	NA
50	23	29	36	49	19	23	29	42
100	13	16	20	26	10	12	15	21
250	5	7	8	11	4	5	6	8
500	3	3	4	6	3	4	5	9
1,000	1	2	2	3	1	1	2	2

Note: Values represent percentage of variance explained, NA = not applicable

Source: Hair Jr. *et al.* (2010)

Table 3.5 shows the interplay among the sample size, the significance level (α) and the number of independent variables in detecting a significant R^2. The values provided in

the table are the minimum R^2 that the given sample size will detect as statistically significant at significance level (α) with a power (probability) of 0.80.

This study employs 13 independent variables and 4 control variables. Based on the initial linear regression analysis performed, the statistical power (R^2) for model 3.1 is 31.8% and for model 3.2 is 65.3% (refer to Table 5.7 and Table 5.12 in Chapter 5). With sample size of 128 (more than 100), the result satisfy the sample size statistical power test as both models have R^2 more than 30% (minimum R^2 that specified sample size will detect as statistically significant at the 0.01 and 0.05 significance levels are 11% and 8%, respectively).

3.8 SUMMARY AND CONCLUSION

The first part of this chapter discusses the empirical schema of the study. Four main research questions are identified. The first research question is to identify patterns in the risk disclosure levels in Malaysian listed companies. The second and third research questions are to determine the influence of the upper echelons characteristics and ownership characteristics on broad categories of disclosure of risk information, respectively. The fourth and final research question is to determine the impact of risk disclosure on the firm's value. There are ten main hypotheses developed with some of these hypotheses further segregated to reflect individual independent variables.

The second part of this chapter discusses the research method applied in this study. In order to meet the overall research objectives, this study adopts a quantitative research approach based on the content analysis technique. A sample of 128 firms listed on the Main Board of Bursa Malaysia in the year 2009 has been selected in the study to see the influence of the upper echelons characteristics and ownership characteristics on risk disclosure level. With respect to independent variables, age, functional track, education, tenure and ethnicity are chosen to represent the upper echelons characteristics; family ownership, government ownership and foreign ownership are chosen to represent the ownership characteristics. With respect to the financial statement data for the study, including the data on earnings per share, total assets, total liabilities, long-term debt and total numbers of shares issued, these data are collected from the financial statement

section of annual reports as well as *Osiris* database. Share price data is obtained from the *Osiris* database.

To test the hypotheses, this study uses linear multiple regression analysis conducted for each type of risk disclosure (operational risk, environmental risk, financial risk and strategic risk) as well as for the aggregate of the four risk disclosures. Since multivariate analysis is used to test the hypotheses, assumptions of multicollinearity, normality, homoscedasticity and linearity are also tested. To test the multicollinearity assumption, the Pearson correlation matrix is computed to examine the correlation between the independent variables. An analysis of residuals is conducted to test for homocedasticity, linearity and normality. The next two chapters present and discuss the findings of the study.

A test of both homoscedasticity (constant variance) of the errors and violation of the linearity assumption is undertaken by plotting the residuals versus predicted values, which are part of the standard output for multiple regression analysis in SPSS. The points in this plot are found to be reasonably symmetrically distributed around a horizontal line. This suggests that linearity is not violated. Also points in the plot are not becoming spread-out as a function of predicted values, suggesting that the homoscedasticity assumption is not violated. Finally, a test of normality of the distribution of errors is undertaken by a normal probability plot of the residuals. It is found that the points on the plot fall reasonably close to the diagonal line and do not display a 'bow'shape or S-shape. This indicates that there is not excessive skewness or kurtosis in the data.

CHAPTER 4

RESULTS OF RISK DISCLOSURE CONTENT ANALYSIS

4.1 INTRODUCTION

The objective of this chapter is to report the results of risk disclosure content analysis made in the annual reports of Malaysia's largest listed companies (excluding banking/ finance/insurance industry companies). Specifically this chapter will answer research question one in this study. In this chapter, the results of content analysis are summarised and analysed. The sample examined comprises 128 companies and is extracted from the Bursa Malaysia based on the top 200 by market capitalization. The purpose is to examine the extent and nature of corporate risk disclosure in the year 2009.

This chapter presents the way companies report on different types of risks, and hence identifies current risk disclosure practices. The disclosure score obtained from the content analysis will be used to build a disclosure measure for the level of annual report risk disclosure. This measure will be used in the next chapter, namely Chapter 5, to empirically test the relationship between risk disclosure level and its determining factors as well as between risk disclosure level and the firm value.

The structure of this chapter is as follows. Section 4.2 presents the results of risk disclosure practices in terms of categories (operational risk, environmental risk, financial risk and strategic risk) by Malaysian top listed companies in the year 2009. Then, Section 4.3 presents the disaggregated risk disclosures in terms of items disclosed. Next, risk disclosures by types of companies and types of industries are presented in Section 4.4 and Section 4.5, respectively. The results are discussed in Section 4.6. A summary and conclusion for the chapter is given in Section 4.7.

4.2 RISK DISCLOSURES BY CATEGORIES

The results of total disclosures for the four broad risk categories are given in Figures 4.1 and 4.2 as well as in Table 4.1. Figure 4.1 displays the frequencies of sentences

disclosed for each category of risk. Table 4.1 presents their descriptive statistics. For each company's 2009 annual report, all the sentences containing a key risk-related word are categorized into one of four risk categories and totalled as recorded in Figures 4.1 and 4.2, and their mean and standard deviation are computed as shown in Table 4.1.

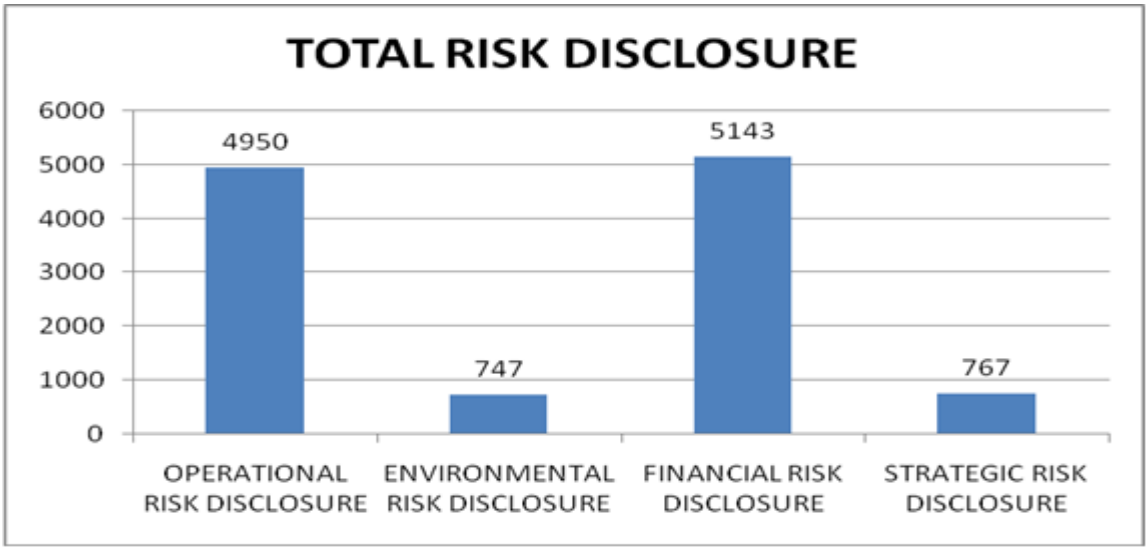


Figure 4.1: Number of Sentences Disclosed for Each Types of Risk

Figure 4.2 depicts the frequency analysis of Figure 4.1 in terms of the proportion of total risk disclosure attributed to each category.

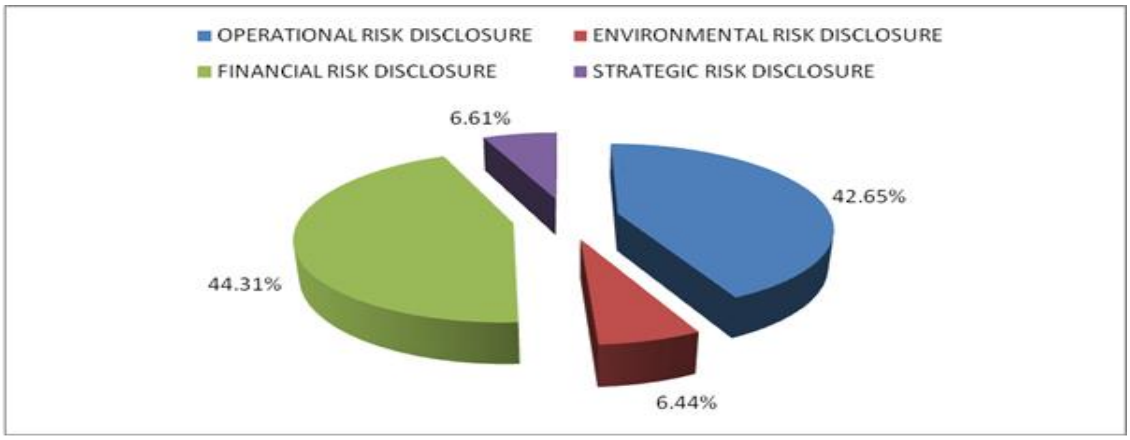


Figure 4.2: Proportion of Total Risk Disclosure

Of the risk categories being disclosed by Malaysian listed companies, the most reported are financial risk and operational risk where the total number of sentences disclosed in the annual reports is 5143 and 4950 sentences, respectively. Much less disclosure is

found for the strategic risk and environmental risk categories at 767 and 747 sentences, respectively. The highest disclosure category, financial risk, is heavily mandated under the prescriptive disclosure requirements of the *Financial Reporting Standard* as prescribed in *Financial Instruments: Presentation and Disclosure* (FRS 132). The other high disclosure category, operational risk, is not as prescriptively mandated as financial risk, but is strongly encouraged under the Malaysian Code on Corporate Governance and guidelines of Bursa Malaysia of the requirement to publish an annual internal control statement. The less disclosed categories, strategic and environmental risk disclosures, are not specified by any regulatory body in Malaysia, so would clearly represent voluntary corporate disclosures.

Table 4.1: Descriptive Statistics of Company's Risk Disclosure

Year	Risk Disclosure	N	Sum	Minimum	Maximum	Mean	Std. Deviation
2009	Operational Risk Disclosure	128	4950	9	144	38.67	23.386
	Environmental Risk Disclosure	128	747	0	24	5.84	3.956
	Financial Risk Disclosure	128	5143	14	86	40.18	11.962
	Strategic Risk Disclosure	128	767	0	25	5.99	4.713
	Total Risk Disclosure	128	11607	41	244	90.68	36.623

Table 4.1 reinforces the findings in Figure 4.1. Perusal of Table 4.1 indicates that the highest mean of corporate risk disclosure is financial risk and operational risk with 40.18 and 38.67 sentences, respectively. This is quite different to strategic risk with an average of 5.99 sentences and environmental risk with an average of 5.84 sentences. However, the standard deviation of operational risk (23.386) is larger than the standard deviation of financial risk (11.962). These standard deviations suggest that the extent of financial risk disclosure, which is heavily prescribed, is more consistent across companies than the extent of operational risk disclosures, which is guided. For the environmental and strategic risk disclosures, the minimum value of zero indicates that there is at least one company not disclosing any information about those two risk

categories. However, the minimum number of total risk disclosures is 41 sentences, which indicates that all sample firms publish some risk information.

4.3 RISK DISCLOSURES BY ITEMS

4.3.1 Operational Risk Disclosure

Based on its broad definition as explained in Chapter 2, the category of operational risk encompasses the risk of opportunity cost or economic loss due to inadequate procedures and policies, risk of operational disruption caused by failure of systems and facilities, human error, failure in internal control, non-compliance with the regulatory requirements, management failure, unauthorised activities, frauds, health and safety. Moreover, in this study, operational risk disclosure is divided into two sub-categories: operational risk threat and operational risk management. Operational risk threat deals with the risk of safety and health, operational problems within the company, and litigation and legal suites. Operational risk management deals with corporate assurance plans, internal controls, risk management as well as policy and procedure.

Table 4.2 shows the distributional parameters of operational risk disclosure and its sub-categories of operational risk threat and operational risk management.

Table 4.2: Operational Risk Disclosure

	N (Item)	Minimum	Maximum	Mean	Std. Deviation
Operational risk threat	27	1	140	31.37	44.37
Operational risk management	66	1	363	62.17	78.32
Total operational risk disclosure	93	1	363	53.23	71.33

From the overall total of 93 items, 66 items are in the operational risk management sub-category while only 27 items falls under operational risk threat sub-category. The mean of operational risk management sub-category disclosure is 62.17 sentences as compared to the mean of operational risk threat disclosure of 31.37 sentences.

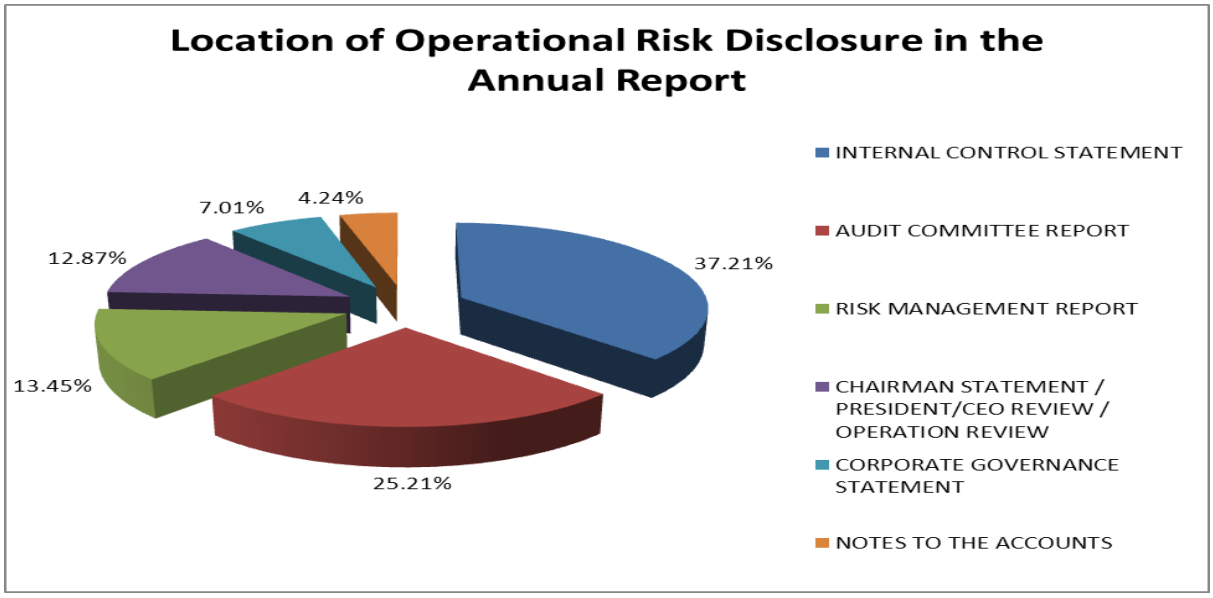


Figure 4.3: Proportion of Operational Risk Disclosure Locations in the Annual Report

Figure 4.3 shows the distribution of operational risk disclosure location (or section) where operational risk disclosures are made in the annual reports. Inspection of Figure 4.3 indicates that the bulk of operational risk disclosure can be found in the internal control statement and audit committee report. Companies disclosed more than fifty per cent of operational risk information in these two particular sections. Some operational risk disclosure can be found in the risk management report, chairman's statement/president or CEO review/operation review, corporate governance statement and notes to the account. Closer inspection of the figure reveals that most of this is due to the companies' orientation which relates to their responsibility towards internal control processes and risk management policies than actual performance risk information. Nevertheless, while the emphasis is found to be on the items directed by Bursa Malaysia Listing Requirements (i.e. the statement on internal control and audit committee report as well as statement on corporate governance), there is evidence of some items of voluntary disclosure, particularly the operational risk information in the chairman statement/president or CEO review/operation review, that go beyond the Bursa Malaysia guideline. As far as the operational risk disclosure is concerned, all companies made use of all the narrative sections in the annual reports.

Turning to the specific items of information disclosed in sentences about operational risk, this is presented in Tables 4.3 and 4.4.

Table 4.3: Operational Risk Threat, by Item

	Operational Risk Threat (Sentence)
(1) Risk of safety	97
(2) Risk of accident	21
(3) Risk of injuries	27
(4) Health threat / hazard	72
(5) Exposure to safety and health	23
(A) Risk of Health And Safety	**240**
(6) Material litigation	112
(7) Risk of provision / contingent liabilities / legal suit	94
(8) Risk of old litigation	3
(B) Risk of Litigations	**209**
(9) High-risk customer on potential fraud	7
(10) Business risk	135
(11) Assessment of risk and profitability	2
(12) Uncertainty over occurrence of undesirable events	9
(13) Dangerous or illegal activities within company	7
(C) Business Interruptions	**153**
(14) Non-technical losses	7
(15) Operating losses	140
(D) Losses in Operations	**147**
(16) Operation problem - threat to asset	24
(17) Operation problem - threat to infrastructure	1
(18) Operation problem - threat to cyber attack	3
(19) Operation problem - threat to sources	3
(20) Operation problem - occupational hazard	7
(21)Operation problem - increase security threat	7
(22) Operational risk	36
(E) Operations Problem	**81**
(23) Ergonomic risk factor and noise hazard	3
(24) Project risk exposure	3
(25) Risk of being disinter mediated	1
(26) Maritime risk	2
(27) Maritime risk exposure	1
(F) Others	**10**
Total Operational Risk Threat Disclosure	**847**

First, Table 4.3 shows the distribution of operational risk threat on an item-by-item basis. From the 27 items identified through content analysis under this sub-category,

they are further grouped into six sub-categories which are (a) risk of health and safety, (b) risk of litigations, (c) business interruptions, (d) losses in operations, (e) operations problem, and (f) others. From the table, risk of health and safety category is the most disclosed (240 sentences) which comprises of risk of safety (97 sentences), risk of accident (21 sentences), risk of injuries (27 sentences), health threat/hazard (72 sentences) and exposure to safety and health (23 sentences). This is followed by the risk of litigations category (209 sentences) which comprises of material litigations (112 sentences), risk of provision/contingent liabilities/legal suits (94 sentences) and risk of old litigations (3 sentences).

Table 4.4: Operational Risk Management, by Item

	Operational Risk Management (Sentence)
(1) Risk assessment and methodology	363
(2) Risk evaluation	64
(3) Audit risks (effective coverage)	1
(4) Assurance against the risk of material errors, fraud or lossess	97
(5) Risk Advisory Group	11
(6) Report on risks	45
(7) Risk related issues	71
(8) Risk tolerance	17
(9) Opportunity for fraud	7
(10) Risk-based auditing approach	82
(A) Corporate Assurance	**758**
(11) Risk management function	24
(12) Risk management committee	360
(13) Risk management process	76
(14) Risk management guidelines	7
(15) Risk management programme	23
(16) Risk management training	168
(17) Foreign currency risk management	10
(18) Interest rate risk management	4
(19) Operational risk management	2
(20) Credit and liquidity risk management	10
(21) Risk management process	116
(22) Risk management policy / philosophy	118
(23) Risk management procedure	41

(24) Risk management guideline	10
(25) Risk management principles	8
(26) Risk management services	1
(27) Risk management review	47
(28) Risk management monitoring	57
(29) Risk management and compliance audit / control	25
(30) Project risk management	14
(31) Risk management system	31
(32) Risk management issues	6
(33) Risk management strategy	30
(34) Risk management performance	2
(35) Risk management knowledge	3
(36) Risk management framework	219
(37) Enterprise-Wide Risk Management (EWRM)	35
(38) EWRM structure	11
(39) EWRM framework	29
(B) Risk Management	**1487**
(40) Identification of principal / key risks	171
(41) Achieve balance of risks and return of shareholders	8
(42) Risk of failure to achieve business objective	139
(43) Internal control procedures, process, system of management risk	75
(44) Assurance against material misstatement or loss	167
(45) Weaknesses in internal control that results in material lossess	51
(46) Changing risk, legal and regulatory compliance	8
(47) Changing risk or resolve operational deficiencies	8
(48) Changes in business and external environment	11
(49) Risk mitigation / risk mitigation action plans	169
(50) Risk parameters and standards	6
(51) Risk limit	6
(52) Internal control and risk management	221
(C) Internal Control	**1040**
(53) Risk policy / risk procedure	61
(54) Risk-aware culture	40
(55) Material risk	120
(56) Risk reporting	81
(57) Risk discussion	5
(58) Review of risk	78
(59) Risk oversight	14
(60) Risk profile	153

(61) Risk at acceptable level	52
(62) Risk analysis on common risk	12
(63) Risk communication	18
(64) Risk awareness and review session	26
(65) Risk information system	20
(66) Risk identification, evaluation and management	138
(D) Policy And Procedure	**818**
Total Operational Risk Management Disclosure	**4103**

However, turning to each 27 items in the list, the most popular items under operational risk threat category include operating losses, business risks and material litigations. Examples of these most reported risks are as follows:

> The reduction in the Group's operating profit was mainly due to losses in the Integrated Liner Logistics' segment of RM847.6million.
>
> (MISC Berhad, Annual Report 2009)

> Risks forbearance shall not exceed capabilities and capacity to manage; Any business risks to be assumed shall be within the Group's core competencies to manage…
>
> (IOI Corporation Berhad, Annual Report, 2009)

> The DRC reviewed and deliberated on reports and updates formulated by TM Group Legal and Compliance on the following matters:
>
> - TM's litigation risk exposure
> - Strategic litigation risk management programme
>
> (Telekom Malaysia Berhad, Annual Report 2009)

Second, Table 4.4 shows the distribution of operational risk management on an item-by-item basis. From the 66 items identified through content analysis under this sub-category, they are further grouped into four sub-categories which are (a) corporate assurance, (b) risk management, (c) internal control, and (d) policy and procedure. A general note is that the corporate governance code which include the internal control and risk management might have contributed to the operational risk disclosure generally. However, most disclosures are bland statements (which is too general and do not clearly explain the risk-relevant to investors) such as those disclosures related to internal control system and risk management policy. These disclosures mirror statement

on internal control guideline and noticeably reflect the pressures of regulations on companies in relation to risk management.

4.3.2 Environmental Risk Disclosure

Environmental risk, as drawn from the definition in Chapter 2, arises from macroeconomic forces, which are factors essentially beyond the organisation's control. It comprises disclosures relating economic risk such as national economic conditions and the global financial crisis; to potential natural disaster conditions; to political risk, legal and regulatory risk; and to industry-specific risks associated with actions of competitors, suppliers and customers.

Table 4.5: Environmental Risk Disclosure

	N (Item)	Minimum	Maximum	Mean	Std. Deviation
Environmental risk disclosure	25	1	110	29.88	33.27

Table 4.5 shows the distributional parameters of total environmental risk disclosure. The average disclosure under this category is 29.88 sentences from the overall total of 25 items. At least one sentence has been disclosed by companies in the sample with the maximum disclosure of 110 sentences.

Table 4.6 shows the frequency distribution of environmental risk on an item-by-item basis. The most popular item disclosed under this category is economic outlook/economic prospect (110 sentences, 14.73%) and global economic outlook/prospect (102 sentences, 13.65%). This is followed by investor relations (83 sentences, 11.11%) and geographic risk (82 sentences, 10.98%). Environmental risk is a category of disclosure which is essentially unregulated, so it is left to the discretion of management. The results suggest that this category of risk disclosure is not only relatively low, but is focused on broad commentary on the macroeconomic outlook and general conditions for investors. Typical examples of the most reported environmental risk are as follows:

To boost sales in the wake of economic uncertainty in the domestic market, two upgraded versions of existing models were introduced.

(Proton Holdings Berhad, Annual Report 2009)

The Group's diversified income streams continue to provide an optimal buffer against ongoing economic volatility both in Malaysia and abroad and its concentration on the ownership and management of regulated utilities operating under long-term concessions underpins the Group's ability to continue to perform well even in times of global economic uncertainty.

(YTL Berhad, Annual Report 2009)

The additional capacity will enable PTP to capitalize on the additional demand and new opportunities once the global economic recovery gathers momentum later in 2010.

(MMC Corporation, Annual Report 2009)

The insurance industry outlook remains positive, but continues to be challenging against the anticipated slowdown in domestic demands arising from the global economic uncertainty. Berjaya Sompo remains optimistic that it will forge ahead despite these challenges.

(Berjaya Corporation Berhad, Annual Report 2009)

Though there are signs of recovery globally, regionally and domestically, we are cautiously optimistic of the prospects for the financial year 2010. Fortunately, due to our long-term strategies which form the foundation of our growth, the Boustead Group is comfortably diversified.

(Boustead Holdings Berhad, Annual Report 2009)

FUTURE PROSPECTS AND OUTLOOK

The Malaysian economy is recovering and consumer spending and confidence are also seen to be improving, which augurs well for the retail industry whose performance it is closely linked to.

(AEON Co. (M) Berhad, Annual Report 2009)

Table 4.6: Environmental Risk Disclosure, by Item

	Environmental Risk Disclosure (Sentence)
(1) Economic outlook/prospect	110
(2) Global economic outlook/prospect	102
(3) Investor relations	83
(4) Geographic risk	82
(5) Economic volatility/uncertainty	38
(6) Global growth prospect/global opportunity	37
(7) Global financial crisis/meltdown/turmoil	34
(8) Economic risk	28
(9) Global demand/Domestic demand	56
(10) Global economic crisis/uncertainty	54
(11) Country risk	22
(12) Environmentally hazardous substance	22
(13) Changes in the regulatory risk / regulatory risk	21
(14) Impact of financial crisis/economic crisis	14
(15) Changes in the commercial risk / commercial risk	13
(16) Softened demand	12
(17) Political uncertainty/risk	4
(18) Global energy outlook scenario	3
(19) Social risk	2
(20) Increasing competition in the operation's countries	2
(21) Risk of global warming	2
(22) Changes in the legal risk / legal risk	2
(23) Risk of sewage flooding	2
(24) Risk associated with water borne transportation	1
(25) Risk of pollution caused by storm discharges	1
Total Environmental Risk Disclosure	**747**

4.3.3 Financial Risk Disclosure

Financial risk, based on the definition in Chapter 2, covers financial risk management objectives and policies, interest rate risk, foreign currency exchange rate risk, price and commodity, credit risk, market risk, and cash flow and liquidity risk as well as other risks which relates to financial risks.

Table 4.7: Financial Risk Disclosure

	N (Item)	Minimum	Maximum	Mean	Std. Deviation
Financial risk disclosure	45	1	804	114.29	175.89

Table 4.7 shows the statistical parameters of financial risk disclosure for 45 items. The mean disclosure under this category is 114.29 sentences, which it is the highest mean of the risk disclosure categories in this study. Table 4.8 shows the frequency distribution of financial risk items. Financial risk items further categorized into eight sub-categories: (a) financial risk management objectives and policies, (b) foreign currency exchange risk, (c) interest rate risk, (d) credit risk, (e) cash flow and liquidity risk, (f) price and commodity risk, (g) market risk, and (h) other risk-related financial risks.

Based on Table 4.8, the results indicate that overall, financial risk management objectives and policies (1146 sentences) are the most reported. This result may be due to the fact that most of the companies seem to comply with the requirement in FRS 132 to provide financial risk management objectives and policies (Ismail and Abdul Rahman, 2011). Besides financial risk management, other most popular financial risk disclosure items are foreign exchange risk (1154 sentences, 22.44%), interest rate risk (982 sentences, 19.09%), credit risk (957 sentences, 18.61%), cash flow and liquidity risk (439 sentences, 8.54%), price and commodity risk (169 sentences, 3.29%) and market risk (147 sentences, 2.86%).

Table 4.8: Financial Risk Disclosure, by Item

Items	Financial Risk Disclosure (Sentence)
(1) Financial risk management	56
(2) Financial risk management objectives and policies	228
(3) Finance risk exposure	16
(4) Risk from financial instrument	101
(5) Risk exposed from financial instruments	32
(6) Risk specific to obligation	117
(7) Risk of ownership	230
(8) Risk estimates and material adjustments / critical judgements	249
(9) Risk assumptions	111
(10) Risk of future refinancing	6

(A) Financial Risk Management Objectives and Policies	**1146**
(11) Foreign currency exchange risk	512
(12) Foreign currency exchange risk exposure	478
(13) Risk of foreign currency transactions	53
(14) Risk of foreign currency translation	66
(15) Forward foreign exchange contract	45
(B) Foreign Currency Exchange Risk	**1154**
(16) Interest rate risk	804
(17) Interest rate risk exposure	142
(18) Interest rate profile	7
(19) Interest rate and borrowing exposure	22
(20) Interest rate swap	7
(C) Interest Rate Risk	**982**
(21) Credit risk	589
(22) Credit risk concentrations	78
(23) Customer credit history	9
(24) Credit risk limit	8
(25) Risk of non-performance by creditors	16
(26) Credit risk exposure	251
(27) Credit facilities	6
(D) Credit Risk	**957**
(28) Cash flow risk / cash flow exposure	135
(29) Liquidity risk / Liquidity exposure	304
(E) Cash Flow and Liquidity Risk	**439**
(30) Price and commodity risk	117
(31) Price and commodity exposure	27
(32) Bunker price risk	4
(33) Bunker price risk exposure	1
(34) Exposure to adverse movements in vegetable oil prices	1
(35) Price volatility risk	19
(F) Price And Commodity Risk	**169**
(36) Market risk	124
(37) Systemic risk	4
(38) Market risk exposure	19
(G) Market Risk	**147**
(39) Risk of material misstatement	129

(40) Insurance risk	12
(41) Claims on disputed taxes, supply of goods/services & compensation	1
(42) Value-at-risk on loan and derivatives portfolio	1
(43) Counter-party risk	3
(44) Risk of loss related to the bankruptcy of a vendor	2
(45) Risk of no prospect of future loans and advances to customer recovery	1
(H) Others	**149**
Total Financial Risk Disclosure	**5143**

As expected, the abovementioned items are the most disclosed items as they have been specified in the *Financial Reporting Standard* (FRS 132). Based on the FRS 132, there are four major types of risk that should be identified. They are[27]:

(1) Market risk which includes both potential for loss and potential for gain.
   i) Currency risk – value of instrument may fluctuate due to changes in foreign exchange rate
   ii) Fair value interest rate risk – value of instrument may fluctuate due to changes in market interest rates
   iii) Price risk – value of instrument may fluctuate as a result of changes in market prices

(2) Credit risk – one party fails to discharge an obligation and causes the other party to incur a financial loss.

(3) Liquidity risk or funding risk – an entity encounters difficulty in raising funds to meet commitments related with financial instruments.

(4) Cash flow interest rate risk – future cash flows of an instrument may fluctuate due to changes in market interest rates.

The financial risk item 'other' has been created because these disclosures were of a more general nature regarding financial risk (e.g., global financial risk conditions affecting the firm).

[27]Source: Lazar and Choo (2008)

4.3.4 Strategic Risk Disclosure

Strategic risk, as defined in Chapter 2, refers to risk arising from operating in a particular industry and risks associated with the company's future business plans and strategies. As shown in Table 4.9, the average disclosure under the strategic risk category is 29.5 sentences from the overall total of 26 items. Table 4.10 shows the distribution of strategic risk items.

Table 4.9: Strategic Risk Disclosure

	N (Item)	Minimum	Maximum	Mean	Std. Deviation
Strategic risk disclosure	26	1	237	29.5	50.81

Table 4.10: Strategic Risk Disclosure, by Item

	Strategic Risk Disclosure (Sentence)
(1) Company prospects	237
(2) Industry outlook / prospect	143
(3) Company outlook	62
(4) Competition in market share	35
(5) Strategic risk	30
(6) Competition in industry	29
(7) Strategic opportunity business investment	24
(8) Business expansion (investment)	23
(9) Investment risk	21
(10) International market prospect	19
(11) Disposal of business	17
(12) Joint venture risk	16
(13) International market access / entrance	16
(14) Product growth opportunity	15
(15) Market penetration	13
(16) Product support opportunity	13
(17) International market presence	11
(18) Acquisition risk	11
(19) Acquisition-driven growth strategy	10
(20) Use of technology to gain competitive edge	9
(21) International market exposure	7
(22) Strategic initiatives to enhance its competitive position	2

(23) Risk of stranded assets and poor return on investment	1
(24) Electric technology as a threat	1
(25) Risk of unforeseen complications of new technologies or innovation	1
(26) Difficulties in developing new products and services at competitive prices	1
Total Strategic Risk Disclosure	**767**

From the 26 items identified, the most popular strategic risk disclosures are company prospects (237 sentences, 30.90%) and industry outlook/prospect (143 sentences, 18.64%). These results attempt to explain the requirement by the Bursa Malaysia (Chapter 9 *Continuing Disclosure*) which requires companies to discuss industry trends, development and group performance in their annual reports (Amran *et al.*, 2009). Though there is no specific requirement to disclose any specific risks, the Appendix 9C *Contents of annual report*, paragraph 7 of the Chapter 9 *Continuing Disclosure* by Bursa Malaysia Listing Requirements have some requirements on the issues to be reported in the company's annual reports.

> The Chairman's statement which represents the collective view of the board of directors setting out a balanced summary which includes the following:
>
> (a) A brief description of the industry trend and development.
>
> (b) A discussion and analysis of the group's performance during the year and the material factors underlying its results and financial position. It should emphasis trends and identify significant events or transactions during the year under review; and
>
> (c) The prospects of the listed issuer.

In the face of this stock exchange requirement, the extent of disclosure of these items is still relatively low. Examples of the strategic risks reported are as follows:

> The Division is increasing its exposure to China, particularly the mining sector to capitalize on the twin trends of urbanization and resource scarcity.
>
> (Sime Darby Berhad, Annual Report 2009)

Addressing Major Strategic Risks

In this regard, the Division will continue to provide an active and supporting role to address major strategic risks in particular the tariff review, fuel cost pass through mechanism and pricing study, and Malaysian Electricity Supply Industry (ESI) structure/challenges to ensure the successful identification of strategic risks implementation plans and the associated risk mitigation plans.

(Tenaga Nasional Berhad, Annual Report 2009)

4.4 RISK DISCLOSURES BY COMPANIES

This section analyses the extent to which different degrees of disclosure categories are concentrated or disbursed across companies within the sample.

Table 4.11 shows that all companies disclose some information about operational risk and financial risk. However, there are a few companies that do not disclose environmental risk and strategic risk information which leave the disclosed companies of that two types of risk information are 97.66% and 99.22%, respectively. Further analysis shows that for environmental risk and strategic risk, numbers of companies that do not disclose any information under these two categories are three and one, respectively.

Table 4.11: Companies Disclosing Risk Information

Category	Percentage of Total Sample (N=128)
Operational risk	100.00%
Environmental risk	97.66%
Financial risk	100.00%
Strategic risk	99.22%

4.4.1 Operational Risk Disclosure

Based on Figure 4.4, a majority of the companies (77.34%) had less than 10 sentences operational risk threat disclosed in their annual reports. Only one company disclosed 50 sentences or more about operational risk threat.

Figure 4.4: Operational Risk Threat, by Company

Figure 4.5: Operational Risk Management, by Company

Based on Figure 4.5, the majority of companies (56.25%) disclosed less than 30 sentences on operational risk management in their annual reports. There are 3 companies that disclosed 90 sentences or more in their annual reports.

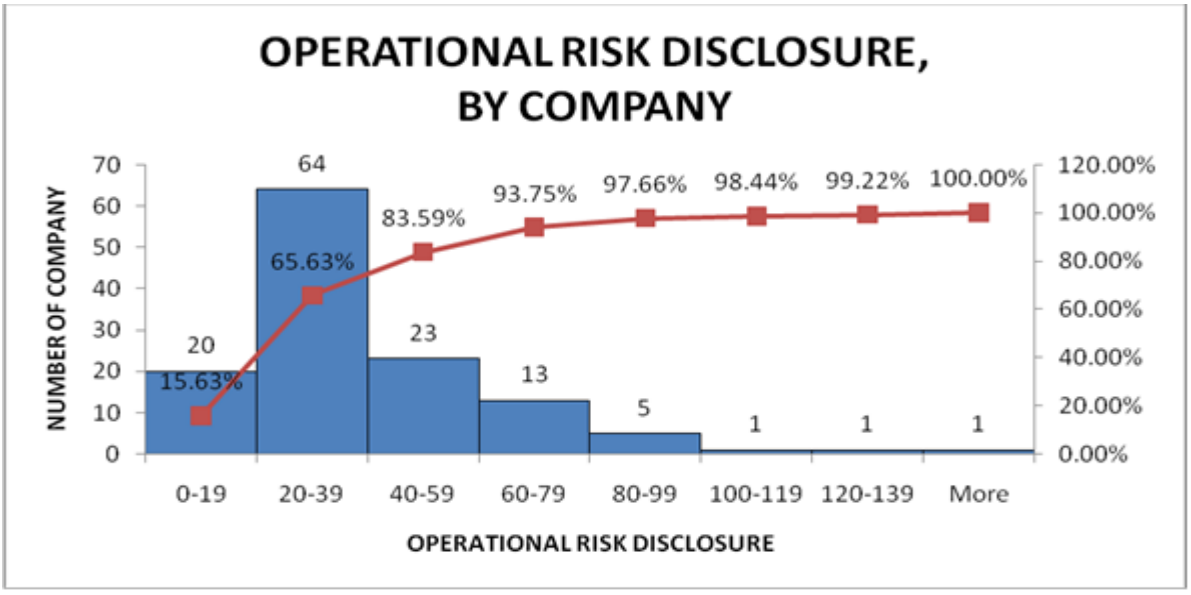


Figure 4.6: Operational Risk Disclosure, by Company

Figure 4.6 shows the majority of companies (65.63 %) disclosed less than 40 sentences of total operational risks in their annual reports. The frequency of disclosure of total operational risks is skewed to the left, as revealed by the Kolmogorov-Smirnov test. The Kolmogorov-Smirnov statistic was significant ($p = 0.000$) and a visual inspection of the stem-and-leaf plot confirmed that the operational risk disclosure by companies were positively skewed. This result indicates that the assumption of normality was violated. This normality test suggests that the degree of total operational risk disclosure is widely disbursed across companies in the sample. The inference is that the use of regulatory guidelines (by Bursa Malaysia) over this category of disclosure has resulted in a diversity of disclosure practices amongst listed companies.

4.4.2 Environmental Risk Disclosure

Figure 4.7 shows the number of companies that disclosed different degrees of environmental risk information. There is a dominant concentration of 97.66% of companies disclosing less than 15 sentences on environmental risks in their annual reports. This is a disclosure category that faced minimal regulation. The result in Figure 4.7 infers that Malaysian listed companies tend not to voluntarily disclose information items about environmental risk, which is a category of company risk that is normally outside managements' control.

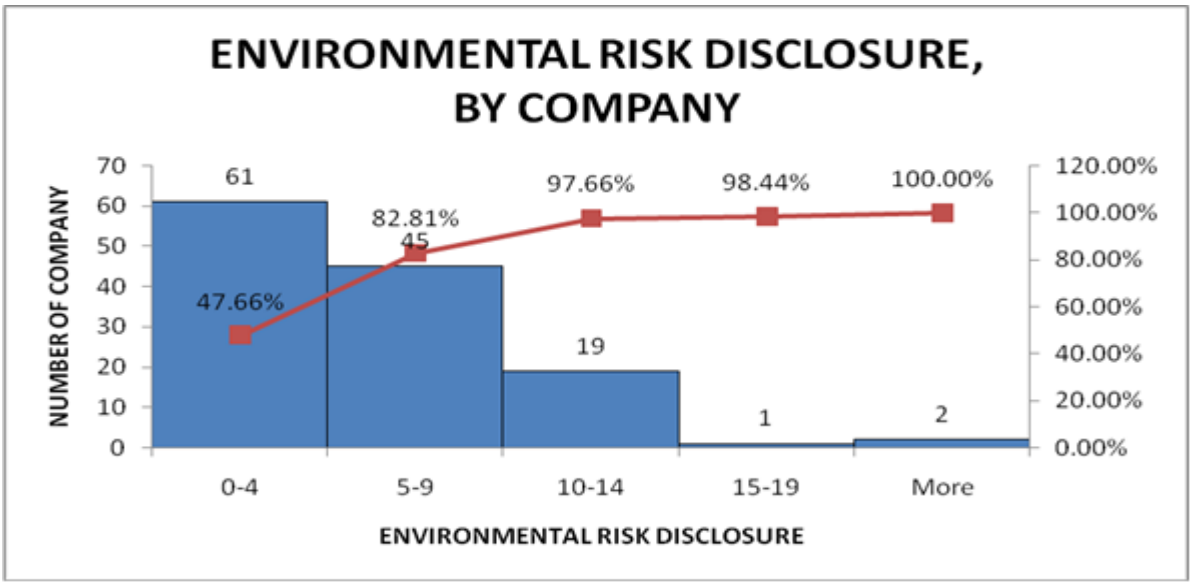


Figure 4.7: Environmental Risk Disclosure, by Company

4.4.3 Financial Risk Disclosure

The results in Figure 4.8 show that the degree of disclosure of financial risk information is well disbursed amongst companies in the sample. The Kolmogorov-Smirnov test indicates that the frequency distribution in Figure 4.8 is significantly normal ($p=0.083$). Hence, while the levels of financial risk disclosure are high (e.g., only one company disclosed less than 20 sentences of financial risk), the mandating of such disclosures has still resulted in widely spread degrees of disclosure across companies. This result is consistent with Othman and Ameer (2009) who conclude that the extent of compliance of FRS 132 is varied among Malaysian companies even though majority of firms had complied with FRS 132.

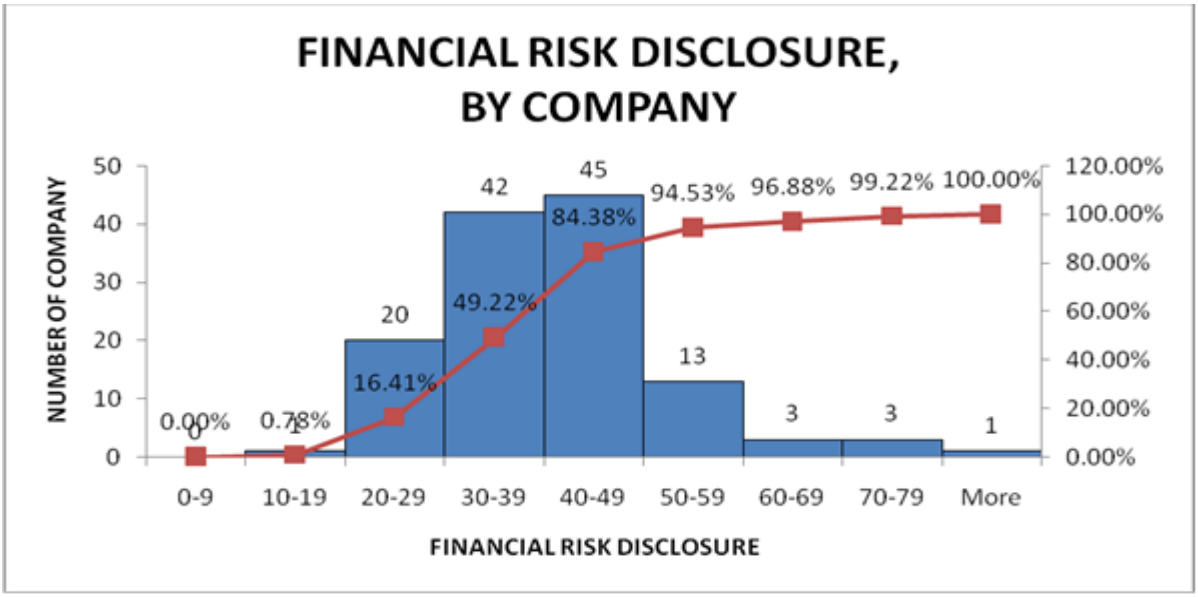


Figure 4.8: Financial Risk Disclosure, by Company

4.4.4 Strategic Risk Disclosure

Figure 4.9 shows a concentration of companies at the low end of disclosures of information about strategic risk. Hence, a majority of the companies (83.59%) disclosed less than 10 sentences on strategic risks in their annual reports. Similar to the results from Figure 4.7 relating to the voluntary disclosure of environmental risks, the results in Figure 4.9 infer that most Malaysian listed companies are not inclined to voluntarily disclose much information about strategic risk.

Figure 4.9: Strategic Risk Disclosure, by Company

4.5 RISK DISCLOSURES BY INDUSTRIES

The 128 firms which constitute the sample of this study are extracted from the Bursa Malaysia top 200 companies by market capitalization. These firms were categorized into seven major sectors based on Bursa Malaysia Stock Exchange classification (as shown in Chapter 3). These sectors include Trading/Services (42 firms), Construction (9 firms), Consumer Product (26 firms), Industrial Product (34 firms), Plantations (6 firms), Properties (7 firms) and Infrastructure and Technology (4 firms). Table 4.12 shows the results of risk disclosure among industries.

The results show that the average risk disclosures for all industries are in the range of 80 to 100 sentences per company except for the infrastructure and technology industry which has the highest level of disclosure, 102.25 sentences per company. In general, the results provide evidence that firms in infrastructure and technology industries disclose more information than firms in other type of industries. For this particular industry, being subject to more rapid changes in the development of new instruments and technology compared to others will encourage them to increase their disclosure. Moreover, the nature of this industry will influence the companies to have more risk information disclosed (Amran *et al*., 2009).

Table 4.12: Average Risk Disclosure per Company and a One-Way ANOVA Test

INDUSTRY	AVERAGE DISCLOSURE	ONE WAY ANOVA TEST	
		F	Sig.
Trading/Services	97.93	1.2135629	0.303955
Industrial Product	84.14		
Consumer Product	80.68		
Construction	97.00		
Properties	92.57		
Plantation	99.86		
Infrastructure and Technology	102.25		

It was expected that industry categories would be found to have an effect on the level of disclosure, given the findings in previous accounting disclosure studies (e.g., Haniffa and Cooke, 2005). However, as shown in the Table 4.12, a one-way ANOVA test demonstrates that there is no significance different between industries. Though these findings do not support most of the results found in previous literature, the results of this study support other studies which have found an insignificant industry-risk disclosure relationship (e.g., Beretta and Bozzolan, 2004; Aljifri and Hussainey, 2007). Perhaps the strengthening of Bursa Malaysia's disclosure guidelines on risk and internal controls since the global financial crisis, coupled with a propensity for firms in Malaysia to mimic the wording of compliance text in their annual reports, may help explain the lack of industry differences.

4.6 DISCUSSION OF RESULTS

Several highlights can be drawn from the results. As indicated in Table 4.1, the overall mean score for total risk disclosure among Malaysian public listed companies in the year 2009 was 90.68 sentences. It is noticeable that total sentences for risk disclosure ranges from 41 sentences to the maximum of 244 sentences. The total risk disclosures mean score in this study is relatively high as compared to the results found in Amran *et al.* (2009). Using a total of 100 Malaysian public listed companies' annual reports in the year 2005, Amran *et al.* (2009) found that the average total risk management disclosure sentences disclosed was only 20.22 sentences, and the risk management disclosure ranges from the minimum of three sentences to the maximum of 78 sentences. The increase in risk reporting from year 2005 (as evidenced by Amran *et al.*, (2009)) to 2009 is not altogether a big surprise considering the rising attention towards risk reporting triggered by the global financial crisis. The results also suggest that Malaysian companies have improved their disclosure level on risk over the years.

Second, the overall result for risk disclosure also shows that the entire 128 companies in the sample disclosed some information on risk, namely, operational risk and financial risk. These results were not consistent with studies done by Amran *et al*. (2009) in which they found that of the risk type being disclosed, only 96 percent of the companies selected in their studies disclosed some kind of information on operation risk and 64 percent of the companies disclosed information on financial risk. However,

the result on strategic risk reveals that 99.22% companies make disclosure on the events related to the strategic decision about their companies while in Amran *et al*. (2009), they show that 97 percent of the companies in their sample disclosed information on strategic risk. As a comparison, the results on these three types of categories show some incremental disclosure over the years by Malaysian companies which may be the reflection of the increase in financial reporting requirements especially on financial and operational risks information. Though a few companies are identified to not disclose environmental and strategic risk disclosures, overall, these results suggest that majority companies in the sample try to signal some kind of risk information to the investors at the same time. Based on the signalling theory, investors will perceive a higher level of risk of an organisation if such information were not disclosed. Blacconiere and Patten (1994) suggest that if management do not disclose information which other firms have disclosed, investors would assume it is because the information is adverse.

Third, turning to each risk category, it is found that the financial risk category is the highest type of risk disclosure in this study. Some items mainly interest rate risk, credit risk and foreign currency risk show significant level of disclosure compared to other items. All of these items can be found in the notes to the accounts section. Centring on the five risk items related to *Financial Instruments: Presentation and Disclosure* (FRS 132), further analysis on the types of financial risk is shown in the Table 4.13.

Table 4.13: Financial Risk Related to FRS 132

Types Of Risk	Total Disclosure (%)
Foreign currency exchange risk	22.44%
Interest rate risk	19.09%
Credit risk	18.61%
Cash flow and Liquidity risk	8.54%
Price and commodity risk	3.29%
Market risk	2.86%

The results in Table 4.13 show that the highest score is 22.44% for the foreign currency exchange risk. The results are inconsistent with the results of Othman and Ameer

(2009) and Ismail and Abdul Rahman (2011) in the Malaysian context. Othman and Ameer (2009) and Ismail and Abdul Rahman (2011) find that interest rate risk is the highest type of market risk disclosed by top 500 companies in the year 2006 and top 150 companies in the year 2007, respectively. Othman and Ameer (2009) argue that this phenomenon is due to the fact that most of the companies in Malaysia are exposed to interest rate risk in carrying out their businesses. Instead, this study finds different results regarding financial risk disclosure in which the highest score is foreign currency exchange risk. This result may be because of the economic factors in the year 2009 where it was a challenging operating environment by Malaysian companies due to higher foreign exchange translation losses, the impact of foreign currency exchange exposure and foreign currency exchange debts/borrowings (e.g., Sime Darby Berhad, Annual Report 2009; Tenaga Nasional Berhad, Annual Report 2009).

On top of that, most of the Malaysian top companies are seem to comply with the requirement in FRS 132 to provide disclosures on financial risk management. Even though the extent of compliance with FRS 132 by Malaysian companies varies (Othman and Ameer, 2009), the mandatory nature of the regulatory disclosure provisions is likely to explain the risk information increases (Jorgensen and Kirschenheiter, 2003).

Considering the second highest risk disclosure category in this study, it is operational risk. This study has divided operational risk disclosure into two sub-categories, namely operational risk threat and operational risk management. Operational risk threat is more related to beyond the requirement of risk reporting by the company, whereas operational risk management is more towards compliance with the guidelines for the *Statement of Internal Control* issued by the Bursa Malaysia. Additionally, the bulk of operational risk threat can be found in the chairman's statement section and operation review section while operational risk management mostly can be found in the statement of internal control section. Of the risk items being disclosed under operational risk threat, operating losses and business risk are the most reported. These results show that most of the sampled companies are willingly to provide transparency by disclosing information about risks they are facing in conducting their businesses. Despite of competitiveness, these companies are open to sharing their operating losses to the public. The point is that, companies with operational losses might be more concerned

about the existence and severity of this risk within their business lines (Hemrit and Arab, 2011).

With regards to the sub-category of operational risk management, risk assessment and methodology as well as internal control and risk management are the most reported. These results correspond to the findings of Ismail and Abdul Rahman (2011) who report that operation risk, risk assessment, control environment and control activities are the most disclosed information. There are two plausible explanations for these results. First, these disclosures prominently reflect the demanding pressures by public listed companies in Malaysia to follow the guidelines for their internal control statement. Managements are aware that investors deprived of detailed company risk information; therefore, voluntary disclosure of internal control by companies could signal their commitment to maintaining effective internal control to safeguard shareholders' investment and company's assets (Haron *et al*., 2010). Second, according to signalling theory, managers have the incentive to voluntarily disclose operational risk to signal to investors their ability in coping with the risk within the firm. These companies will also be encouraged to disclose information relating to their capabilities with respect to operational risk management in order to convince the market that losses affecting their capital are less likely to happen. Therefore, even though to follow the guidelines is not mandatory, most of the companies choose to comply with them. Operational risk information by companies could benefit the community in the form of providing relevant information on the state of risk management and internal control within a company and also as a signal to the quality of the firm.

The category of strategic risk is among the two least disclosure, averaging 767 sentences. This result is slightly higher than finding by Amran *et al.* (2009) who found that strategic risk is only 647 sentences. In comparison with the studies by Amran *et al.* (2009), it is evident from this small gap that Malaysian companies choose to disclose less risk information voluntarily. This is because, although there is the general requirement of the Bursa Malaysia for companies to discuss industry trends and company performance, it is so general that it does not explicitly require companies to discuss risks (Amran *et al.*, 2009). Under signalling theory, an incentive for a firm to disclose potential information on risk is that not doing so will subject the management to substantial reputation and litigation costs if the risk becomes known through

subsequent events (Skinner, 1994). Chalmers and Godfrey (2004) support the view that managers may draw negative attention by withholding information. To avoid the company from being into a competitive disadvantage, when necessary, managements only disclose not more than the minimum required information. In other words, if one company provides overall detail on its strategic problems and strategic risk management, competitors of the company might relatively glean its valuable and vital commercial insight. In a different aspect, managements can always find positive ways of describing risk and risk management for fear of this competitive disadvantage.

With regard to the final category, environmental risk disclosure, economic outlook/prospect and investor relations demonstrate the highest disclosure. These results show that the directors acknowledge the need for shareholders to be informed of all material business matters affecting the company especially during the global economic downturn. For example, one company writes:

> Under the current global economic scenario, as business fundamentals and credible accounting become the new touchstones by which investors judge corporate quality, the company has continued to maintain good communications with its investors and analysts, in an effort to avoid undue market volatility and ensure that the company gets credit for the strategies they pursue. The core of good investor relations practice hinges on the need for clarity in communication, top management commitment of time, consistency in reporting over time, and being proactive in anticipating questions.
>
> (Tenaga Nasional Berhad, Annual Report 2009)

The global economic crisis seems to reflect the information disclosure by companies on environmental risk. Almost all companies under study stated this scenario in their annual reports and try to predict the future. Management is less willingly to talk about the downside risk situation, unless the risks are completely out of their control, such as economic outlook or economic prospect due to the national and global economic crisis. The following quotations are examples relating the economic outlook/prospect that has been disclosed by companies under study:

> There are signs of a slow but sure economic recovery on the global and domestic fronts. In line with this, TNB's Board of Directors, while cautious, is optimistic about our prospects going forward. While external factors will to some extent impact on the

> Group's performance in the new financial year, TNB will undertake the necessary measures to mitigate volatile operating costs while enhancing our operational efficiencies...through undertaking the necessary due diligence and professional assessment of the risks and profitability involved.
>
> (Tenaga Nasional Berhad, Annual Report 2009).

> While 2009 ended on an optimistic note, the economic outlook for 2010 still falls short of the pre-crisis years. The crisis has not only altered ICT expenditure, but also customers' consumption behaviour.
>
> (Telekom Malaysia Berhad, Annual Report 2009).

> 2009 was a volatile year, troubled by a worldwide economic slowdown and financial turmoil in the world's major markets. This economic crisis had an adverse effect on our exports of auto parts and plastic products and sales of automobiles and auto parts, palm oil, palm oil products and tourism.
>
> (Oriental Holdings Berhad Annual Report 2009)

On the one hand, managers may have incentives to voluntarily disclose environmental risk disclosure because investors would perceive a higher level of risk in the firm's environment in the absence of such disclosure. On the other hand, it would give pressure for the managers to transparently disclose too much risk information as this issue could affect a company's share price. Since investors were expected to be already aware about some of the current issues such as the economic/financial crisis around the world, they would somehow speculate on how it would affect individual local companies. By disclosing management's perspective ('through management's eyes') on how the external economic condition or situation could affect the company, this would signal credible information to investors for them to estimate the future value of a company's share price. Moreover, disclosing risk information especially the uncontrollable risk would give a positive signal involving the firm's transparency about the exposure to the aftermath from the global economic slowdown. As a result, this could prevent the decline of share prices (Skinner, 1994) because this additional risk information is likely to attract investors and improve the firm's value as well as can prevent competitive advantage by peers.

The statistical tests conducted demonstrated that risk disclosures do not vary much between companies in different industries. The results showed that risk disclosures are in the range of 80 to 100 sentences for all industries except for the infrastructure and technology industries. These infrastructure and technology industries may be subject to more complex and fast-moving nature than others, and therefore, increase their disclosure in order to avoid the appearance of failing to meet the rapid development in technologies for other similar companies. The relatively parallel level of risk disclosure by other industries reflects the high level of competition (e.g., Verrecchia, 1983; Dye, 1986).

4.7 SUMMARY AND CONCLUSION

This chapter has sought to examine the nature and extent of corporate risk disclosure practices of 128 large Malaysian companies in the year 2009. The level of risk disclosure is measured using a content analysis approach. Content analysis is used to reveal absolute corporate risk disclosure levels of Malaysian companies.

The analysis has revealed a significant level of risk information disclosed by companies in the sample including financial risk, operational risk, strategic risk and environmental risk categories. Most disclosures are found to be related to financial risk and operational risk. It is observed that most disclosures are in accordance to the *Financial Reporting Standard* (FRS 132). Meanwhile, some other disclosures are about being generalised policy statements based on the integrity of the company's internal control system and risk management procedures aiming to assure the investor of the annual report that these procedures are in place. Therefore, it is inferred that managers are seeking to demonstrate that they are accountable to shareholders by being able to manage risk at best.

The results presented in this chapter will be utilised in the next chapters for conducting further analysis in order to examine the link between corporate risk disclosure and management-specific characteristics and ownership characteristics as well as the impact of corporate risk disclosure on firm value.

CHAPTER 5

RESULTS AND DISCUSSION OF DETERMINANTS AND VALUE RELEVANCE OF RISK DISCLOSURE

5.1 INTRODUCTION

This chapter presents the results of descriptive, univariate and multivatiate analysis of the data collected on risk disclosure and its determinants. The analysis includes tests of the hypotheses (hypotheses two until ten) as specified in Chapter 3. This chapter also provides a discussion of these results. The results of data analysis are presented in two parts. The first part relates to the results of risk disclosure analysis using upper echelons characteristics (age, functional track, education, tenure and ethnicity) and ownership characteristics (family ownership, government ownership and foreign ownership). The second part is concerned with results about the value relevance to investors in the share market of the risk-related disclosures in company annual reports.

The premise of this thesis is that risk-related disclosures represent information of importance to the decision making of shareholders, but the nature and extent of these disclosures is determined largely by management. Hence, evidence that certain characteristics of key management personnel are predictors of risk-related disclosure is only of interest if it is found that these risk-related disclosures have relevance to shareholders' decision-making and affect the equity value of the company. The two phases of data modelling and analysis in this chapter, therefore, provide a complementary picture of the corporate risk-related disclosure issue.

The chapter is organised as follows. Section 5.2 presents the descriptive statistics of the continuous and dichotomous variables used in the regression tests for both the upper management/ownership models and value relevance model. Both of these models are further analysed in Section 5.3 utilising Pearson product moment correlation analysis between the independent variables. Section 5.4 reports the results of the multiple regression analysis for the determinants of risk disclosure using the baseline model which contains upper management and ownership characteristics as the independent variables. To ascertain the credibility of the initial analysis, Section 5.5 presents the

results of several additional tests that were conducted to determine the sensitivity and the robustness of the regression results given in the baseline model. Section 5.6 examines the results of the multiple regression analysis for the value relevance of risk disclosure. Section 5.7 examines whether endogeneity problem exists. Section 5.8 discusses the overall findings of the study. Section 5.9 - summary and conclusions ends the chapter.

5.2 DESCRIPTIVE STATISTICS

5.2.1 Determinants of Risk Disclosure

Table 5.1 and Table 5.2 present the descriptive statistics of the continuous and dichotomous variables, respectively, used in the baseline model for regression tests of risk disclosure and its determinants. As reported in Table 5.1, the mean value of total risk disclosure is 90.68 sentences (the average number of risk disclosure sentences disclosed by the 128 sampled companies in 2009) which is approximately 37% of the maximum score of 244 sentences. The table shows that there is a fair amount of variation in the disclosure frequency for the sampled companies. The overall disclosure frequency ranges from 41 to 244 sentences. The mean score for each category of risk disclosure reveals that financial risk disclosure is highest (40.18 sentences), closely followed by operational risk disclosure (38.67 sentences). The risk categories of environmental risk disclosure (5.84 sentences) and strategic risk disclosure (5.99 sentences) are much lower.

Turning to predictor variables, Table 5.1 shows that in terms of upper management characteristics, the age of CEOs ranges from 38 years old to 75 years old with the average age of 54 years old. The age of CACs on the other hand ranges from 40 years old to 88 years old with the average age of 63 years old. With respect to functional track characteristics, Table 5.2 shows the majority of CEOs and CACs are in the 'throughput' category. This is shown by the average value of 64.8 percent and 85.2 percent, respectively. With regards to tenure characteristics, the length ranges from zero to 40 years for the CEOs and zero to 37 years for the CACs with the average of 11.34 years and 8.54 years, respectively. This result shows that the CEOs tenure in Malaysian

Table 5.1
Descriptive Statistics of Continuous Variables

	N	*Minimum*	*Maximum*	*Mean*	*Standard Deviation*
(Sentence count for disclosure items. Applies to each risk disclosure category)					
Total Risk Disclosure (TOTAL_RD)	128	41	244	90.68	36.623
Operational Risk Disclosure (OPER_RD)	128	9	144	38.67	23.386
Environmental Risk Disclosure (ENVIRO_RD)	128	0	24	5.84	3.956
Financial Risk Disclosure (FIN_RD)	128	14	86	40.18	11.962
Strategic Risk Disclosure (STRAT_RD)	128	0	25	5.99	4.713
Age CEO (years) (AGE_CEO)	128	38	75	53.76	7.347
Age CAC (years) (AGE_CAC)	128	40	88	63.42	9.515
Tenure CEO (years) (TEN_CEO)	128	0	40	11.34	10.157
Tenure CAC (years) (TEN_CAC)	128	0	37	8.54	7.211
Family Ownership (ratio) (FAMCTRL)	128	0.000	0.670	0.137	0.199
Government Ownership (%) (GOVOWN)	128	0.000	82.040	13.359	18.684
Foreign Ownership (%) (FOROWN)	128	0.000	59.610	9.274	12.701
Size (RM mil) (LNSIZE)	128	234.1	71363.0	5695.0	10286.7
Leverage (ratio) (LEV)	128	0.000	3.880	0.367	0.584

companies is longer than the CACs tenure, suggesting that some of the CEOs are also likely to be the founder or pioneer of the companies.

Table 5.2
Descriptive Statistics of Dichotomous Variables

N	*128*	
Dichotomous Variable	*1*	*0*
Functional Track CEO (FUNCTR_CEO)	64.8% 83	35.2% 45
Functional Track CAC (FUNCTR_CAC)	85.2% 109	14.8% 19
Education of CEO (EDU_CEO)	26.6% 34	73.4% 94
Education of CAC (EDU_CAC)	56.3% 72	43.7% 56
Ethnicity CEO (ETHN_CEO)	34.4% 44	65.6% 84
Ethnicity CAC (ETHN_CAC)	50.8% 65	49.2% 63
Auditor Size (BIG4)	74.2% 95	25.8% 33
Trading / Services sector (TRADSERV)	32.8% 42	67.2% 86
Consumer sector (CONSUMER)	20.3% 26	79.7% 102
Industrial sector (INDUSTRIAL)	26.6% 34	73.4% 94
Construction sector (CONSTRUCTION)	7.0% 9	93.0% 119
Plantation sector (PLANTATION)	4.7% 6	95.3% 122
Property sector (PROPERTY)	5.5% 7	94.5% 121
Infrastructure and Technology sectors (INFRATECH)	3.1% 4	96.9% 124

In terms of ownership characteristics, family domination is found in Table 5.1 to vary from the proportion of zero to 67 percent, with an average proportion of family ownership about 14 percent. With regards to government ownership, the percentage ranges from zero to about 82 percent with an average ownership of 13.36 percent. The percentage of foreign shareholdings for the sample ranges from zero to 59.61 percent, with average foreign shareholdings of about 9.27 percent.

The mean size, as represented by total assets of the firm, is RM 5,700,000, 000. The average for firm leverage is 36.66 percent which is slightly lower than the sample documented by Amran *et al*. (2009) and higher than that documented by Ismail and Abdul Rahman (2011). The average for firm leverage in their samples was 43.12 percent and 24 percent, respectively.

As reported in Table 5.2 for the education characteristics, the majority of CEOs (73.4 percent) do not have any professional accounting qualifications or MBA qualifications. On the other hand, more than half of the CACs (56.3 percent) hold professional accounting qualifications or MBA qualifications. With respect to the ethnicity of managers, Bumiputera[28] CEOs represent an average of 34 percent of the sample companies, indicating non-Bumiputera CEOs domination in the Malaysian corporations. However, the average of CACs who are Bumiputera is slightly higher (50.8%) than the non-Bumiputera CACs (49.2%).

In terms of auditor size, 74.2 percent of companies are audited by a Big 4 audit firm, which is higher than that reported by Yatim's (2010) 69.1%, and almost similar to the one reported by Hassan *et al*. (2008), 74.38%. Finally, with respect to the industry classification, 32.8 percent of companies fall under the trading/services sector. This is followed by the industrial product sector and consumer product sector which comprise of 27 percent and 20 percent, respectively. The rest of the industry classifications form a minority proportion which comprise of construction, plantation, property and infrastructure and technology industries with the average values of 7.0 percent, 4.7 percent, 5.5 percent and 3.1 percent, respectively.

The descriptive statistics of the continuous and dichotomous variables presented in Tables 5.1 and 5.2 are intended to convey a broad profile of the nature and extent of corporate risk disclosure practices, as well as the background profile of factors that are modelled as prospective explanatory variables. These descriptive statistics are not presented for the purpose of establishing that corporate risk disclosure has increased (decreased) due to predictor variables (continuous and dichotomous).

[28] In this study, Bumiputera refers to the Malay group and non-Bumiputera refers to the non-Malays which include Malaysian Chinese, Malaysian Indians and other ethnicity background.

5.2.2 Value Relevance of Risk Disclosure

Table 5.3 displays the descriptive statistics of the sampled firms' value as proxied by their share prices (180 days after the financial year end). Note that all public listed companies in Malaysia must prepare their annual reports and ensure that the audited annual reports are available to public not later than six months (180 days) after the financial year end. The table also offers descriptive statistics for risk disclosure and other variables related to the value relevance model, namely earnings per share and book value of net assets per share. Note that Table 5.3 is presented separately to Table 5.1 because it presents the profile of a self-contained set of variables which are to be used for a separate model – the value-relevance model – in which regulated and non-regulated risk disclosure become the independent variables, not the dependent variable of total risk disclosure as presented in Table 5.1.

Table 5.3
Descriptive Statistics

Variables	Minimum	Maximum	Mean	Standard Deviation
Share prices (SP) (in RM) (180 days after financial year end)	0.19	43.88	3.891	5.647
Earnings per share (EPS) (in sen)	-79.60	261.50	23.855	38.702
Book value of net assets per share (BVNAS) (in RM)	-1.87	11.88	2.403	2.028
Total Risk Disclosure (TRD) (sentence)	41	244	90.920	32.817
Regulated Risk Disclosure (RRD) (sentence)	14	86	40.150	12.294
Non-regulated Risk Disclosure (NRRD) (sentence)	18	165	50.780	27.165

Table 5.3 reveals that there is a broad range of variation in the sample. Total risk disclosure level ranges from 41 to 244 sentences with a mean of 90.92 sentences and a standard deviation of 32.817.[29] Total risk disclosure has been categorized further into regulated risk disclosure and non-regulated risk disclosure. Regulated risk disclosure ranges from 14 sentences to 86 sentences with a mean of 40.15 sentences and a standard deviation of 12.294. Non-regulated risk disclosure ranges from 18 sentences to 165 sentences with a mean of 50.78 sentences and a standard deviation of 27.165. Earnings per share ranges from -79.60 sen to 261.50 sen, with a mean of 23.86 sen and a standard deviation of 38.70. Book value of net assets per share ranges from -1.87 to 11.88 with a mean of 2.40 and a standard deviation of 2.03. Market value of a company as measured by share prices (180 days after the financial year end) ranges from RM0.19 to RM43.88 with a mean of RM3.89 and a standard deviation of 5.65.

Normality tests were conducted on all variables having continuous data in Tables 5.1 and 5.3. Price (2000) states that a reasonably accurate way of determining if the degree of skewness is "significantly skewed" is to compare the numerical value for "skewness" with twice the "standard error of skewness" and include the range from minus twice the standard error of skewness to plus twice the standard error of skewness. If the value for skewness falls within this range, the skewness is considered not seriously violated. Similarly, a range of "normality" can be constructed for kurtosis by multiplying the standard error of kurtosis by 2 and going from minus that value to plus that value. These range tests were conducted and it was found that all these variables computed to be within the acceptable range for both skewness and kurtosis. One exception was total assets data which has been transformed to its natural logarithm.

[29] This table represent different figure of mean and standard deviation of total risk disclosure in this study as the overall sample of companies are reduced to 117 instead of 128 firms originally. The use of a higher sample size for descriptive statistics in Chapter 4 compared to inferrential data analysis in Chapter 5 is not consequential to the findings. As noted already in the results, the average sentences of total risk disclosure is 90.68 in Chapter 4 and 90.92 in Chapter 5. The removal from the sample of a small number of firms that had a small amount of missing data was deemed unnecessary.

5.3 CORRELATION ANALYSIS

5.3.1 Correlation Analysis of Determinants of Risk Disclosure

To examine the correlation between the independent variables, a Pearson product-moment correlation (*r*) is computed. Correlation analysis measures the strength or degree of linear association between two variables. Firstly, it is important to assess the validity of the disclosure score since the measurement of disclosure score requires judgement by the researcher. A firm's disclosure policies as well as disclosure strategies are coordinated across several means and resources which include disclosure components of the disclosure index (Botosan, 1997). Hence, there should be a direct positive relationship between the overall disclosure level and its components, as well as between each component compared to another. Table 5.4 presents the results of a Pearson correlation test between total risk disclosure frequency and its components. The correlation results presented in the table indicate that the four disclosure components (operational risk disclosure, environmental risk disclosure, financial risk disclosure and strategic risk disclosure) exhibit a positive and highly significant correlation with the total risk disclosure.

Secondly, the Pearson product-moment correlation analysis has been performed to test the correlation between the dependent variable (risk disclosure sentences) and independent variables. Pearson product-moment correlation coefficients enable the measurement of correlation between disclosure sentences and other variables. Table 5.5 reports the results for the test of correlation.

Table 5.4

Correlation Coefficients between the Components of Risk Disclosure Frequency

Variables		Total Risk Disclosure	Operational Risk Disclosure	Environmental Risk Disclosure	Financial Risk Disclosure	Strategic Risk Disclosure
Total Risk Disclosure	Pearson correlation Sig. (2-tailed)	1.000				
Operational Risk	Pearson correlation Sig. (2-tailed)	**0.895**** 0.000	1.000			
Environmental Risk	Pearson correlation Sig. (2-tailed)	**0.464**** 0.000	**0.283**** 0.001	1.000		
Financial Risk	Pearson correlation Sig. (2-tailed)	**0.617**** 0.000	**0.267**** 0.002	**0.180*** 0.042	1.000	
Strategic Risk	Pearson correlation Sig. (2-tailed)	**0.526**** 0.000	**0.315**** 0.000	**0.497**** 0.000	**0.231**** 0.009	1.000

**Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

Total Risk Disclosure is the total risk disclosure sentences. Operational Risk, Environmental Risk, Financial Risk and Strategic Risk are proportions of the Total Risk Disclosure sentences.

Turning to correlations between the independent and dependent variables, Table 5.5 shows that ethnicity of CEO (ETHN_CEO), family ownership (FAMCTRL), government ownership (GOVOWN) and company size (LNSIZE) are significantly related to total risk disclosure ($p < 0.01$). Age of CEO (AGE_CEO), tenure of CEO (TEN_CEO), leverage (LEV) and auditor size (BIG4) are also significantly related to total risk disclosure ($p < 0.05$). Other independent variables and control variables are not correlated with total risk disclosure. The correlation coefficient between age of CEO, tenure of CEO and family ownership with the total risk disclosure are negative. These results indicate that risk disclosure decreases with the increase of the CEOs' age and their tenure in the company as well as when the ownership of the company belongs to the family members.

Table 5.5

Correlation Coefficients between Risk Disclosure and Independent Variables

	Total Risk Disclosure	Operational Risk Disclosure	Environmental Risk Disclosure	Financial Risk Disclosure	Strategic Risk Disclosure
AGE_CEO	**-0.188***	**-0.176***	-0.125	-0.104	-0.061
AGE_CAC	0.044	0.060	-0.077	0.023	0.013
FUNCT_CEO	0.095	0.120	-0.035	0.000	0.093
FUNCT_CAC	0.047	0.052	0.069	-0.064	0.173
EDU_CEO	0.116	**0.178***	-0.087	-0.030	0.069
EDU_CAC	0.105	0.099	**0.226****	-0.056	**0.216***
TEN_CEO	**-0.181***	**-0.181***	-0.135	-0.049	-0.119
TEN_CAC	-0.002	-0.017	-0.170	0.135	-0.125
ETHN_CEO	**0.490****	**0.521****	**0.222***	0.108	**0.348****
ETHN_CAC	-0.022	-0.053	0.003	-0.007	0.128
FAMCTRL	**-0.277****	**-0.321****	-0.086	-0.028	**-0.182***
GOVOWN	**0.445****	**0.415****	**0.267****	**0.188***	**0.315****
FOROWN	0.022	-0.013	0.055	0.057	0.024
LNSIZE	**0.456****	**0.414****	**0.255****	**0.237****	**0.287****
LEV	**0.179***	**0.245****	0.032	0.003	-0.012
BIG4	**0.199***	**0.227****	0.039	0.019	0.170
TRADSERV	0.156	**0.211***	-0.030	-0.050	**0.185***
CONSUMER	-0.165	-0.146	-0.013	-0.102	-0.144
INDUSTRIAL	-0.111	-0.105	-0.065	0.001	**-0.191***
CONSTRUCTION	0.076	0.018	-0.035	0.111	**0.183***
PLANTATION	0.039	0.003	-0.010	0.087	0.040
PROPERTY	0.014	-0.084	**0.193***	0.112	0.066
OTHERS	0.064	0.116	0.087	-0.048	-0.086

**Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

With respect to the regulatory guidance influenced operational risk disclosure, this is significantly positively correlated to ethnicity of CEO (ETHN_CEO), government

ownership (GOVOWN), company size (LNSIZE), leverage (LEV) and auditor size (BIG4) and is significantly negatively correlated to family ownership (FAMCTRL) ($p < 0.01$). Similar to the total risk disclosure, both age of CEO (AGE_CEO) and tenure of CEO (TEN_CEO) are significantly negatively related with operational risk disclosure ($p < 0.05$). Another upper echelons characteristic that is correlated with operational risk disclosure is education of CEO (EDU_CEO) which is significantly positively related ($p < 0.05$). This indicates that CEOs who are lower age, have been in the position of CEO for a shorter period and hold either a professional accounting or MBA qualification tend to manage firms that disclose more operational risk information.

With regards to financial risk disclosure, it is significantly positively related to government ownership (GOVOWN) and company size (LNSIZE). In relation with upper echelons characteristics, no variable is found to have correlation with financial risk disclosure. This indicates that demographic characteristics of top managers are likely to have no influence towards regulated financial risk disclosure.

Unregulated disclosures in categories of environmental and strategic risks reveal similar significant relationships with upper echelons and ownership characteristics. Both variables are significantly positively related to ethnicity of CEO (ETHN_CEO), government ownership (GOVOWN) and company size (LNSIZE). However, only strategic risk disclosure is negatively correlated with family ownership (FAMCTRL) ($p < 0.05$) and significantly positively related to education of the CAC (EDU_CAC). This indicates that family ownership companies and CACs with higher education tend to narrower disclosure of more non-technical risk information.

With respect to industry classifications, the results are varied in terms of discretionary disclosures. The trading/services sector is found to disclose more information on operational risk and strategic risk. Companies within the construction sector also tend to disclose more information on strategic risk. However, companies within the industrial sector are found to disclose less information on strategic risk. Companies within the property sector on the other hand tend to disclose more environmental risk.

5.3.2 Correlation Analysis of Value Relevance of Risk Disclosure

Table 5.6 gives the results of the Pearson correlation coefficients between share prices (180 days after the financial year end) and key reported accounting numbers, namely, earnings per share and book value of net asset per share. It also gives the correlations between share prices and risk disclosure levels (total risk disclosure, regulated risk disclosure and non-regulated risk disclosure). These results show that there is a positive and significant relationship ($p < 0.01$) between share price (SP) and both earnings per share (EPS) and book value of net asset per share (BVNAS) as expected in the value relevance model suggesting the earnings and assets have value relevance to equity market investors. This is consistent with prior value relevance studies (e.g. Hassan and Mohd Salleh, 2010).

However, with regard to the relationship between share prices and total risk disclosure, the correlation is not significant although total risk disclosure has the expected sign. Total risk disclosure does not appear to have value relevance. However, non-regulated risk disclosure (i.e., operational, environmental and strategic categories) is found to be significant and positively related to share price so gives preliminary evidence of having value relevance to equity market investors. This preliminary evidence that value-relevance could apply to non-regulated categories of risk disclosure suggests that security analysts view voluntary disclosures, especially in the sensitive area of risk, as proprietary information. Analysts would tend to give greater attention to proprietary information as a potential signal for share price arbitrage decisions.

With respect to the correlation among variables for both determinants of risk disclosure and value relevance of risk disclosure, the correlation matrix confirms that multicollinearity is at acceptable levels between the independent variables, as they do not correlate above 0.80 with the exception of the correlations between total and non-regulated components of risk disclosure.

Table 5.6

Correlation Matrix between Dependent and Independent Variables

Variables	Share Prices (SP)	Earnings per Share (EPS)	Book Value of Net Asset per Share (BVNAS)	Total Risk Disclosure (TRD)	Regulated Risk Disclosure (RRD)	Non-regulated Risk Disclosure (NRRD)
Share Prices (SP)	1					
Earnings per Share (EPS)	**0.796****	1				
Book Value of Net Asset per Share (BVNAS)	**0.348****	**0.291****	1			
Total Risk Disclosure (TRD)	0.149	0.064	**0.280****	1		
Regulated Risk Disclosure (RRD)	-0.014	-0.060	0.138	**0.607****	1	
Non-regulated Risk Disclosure (NRRD)	**0.186***	0.105	**0.276****	**0.933****	**0.281****	1

**Correlation is significant at the 0.01 level (2-tailed)

*Correlation is significant at the 0.05 level (2-tailed)

5.4 MULTIVARIATE ANALYSIS FOR DETERMINANTS OF RISK DISCLOSURE

5.4.1 Baseline Model

Table 5.7 summarises the results from multiple regression analysis linking upper echelons characteristics, ownership characteristics and total risk disclosure and its components. In terms of the strength of each regression in Table 5.7, the *F*-value for the total risk disclosure as well as for its components is statistically significant at the 1 percent level except for the financial risk disclosure. When financial risk disclosure is the dependent variable, the model fit is not statistically significant. The adjusted R^2 for each of the models for operational risk disclosure, environmental risk disclosure,

strategic risk disclosure and total risk disclosure, respectively, provide a reasonable level of explanatory power, ranging from 16.4 percent to 31.4 percent. The adjusted R^2 of 31.4 percent for total risk disclosure is slightly lower than that reported in the previous Malaysian study by Amran *et al*. (2009). They modelled the relationship of company diversification strategy, leverage, company size and industry to the risk management disclosure, and obtained adjusted R^2 of 43.3 percent. Other studies on risk disclosures also report adequate adjusted R^2 such as studies by Ismail and Abdul Rahman (2011) within the Malaysian context and Hassan (2009) within the UAE context, which were 28.1 percent and 29.3 percent, respectively. Given that Ismail and Abdul Rahman (2011) had a multi-industry sample of similar size to this thesis (124 companies), the comparison of its R^2 value is justifiable. Since Hassan (2009) had a sample size of only 41 companies, its comparison would not be as strong.

To test for multicollinearity, the variable inflation factor (VIF) statistic is computed for each independent variable contained in the model in Table 5.7. The results of this VIF test, not reported here, reveal that the VIF statistic is not above 10 for any of the independent variables. By meeting this VIF benchmark (Myers, 1990), it can be concluded that multicollinearity is not severe in its effect on the regression analysis results in this thesis.

Further results revealed in Table 5.7 are that three out of the ten manager's characteristics tested in the study are significantly associated with total risk disclosure. The results presented show a significant effect of functional track of CEO (FUNCT_CEO), tenure of CEO (TEN_CEO) and ethnicity of CEO (ETHN_CEO) on total risk disclosure. The analysis also shows that government ownership is significantly related to total risk disclosure.

The final four columns of Table 5.7 present the results for the disaggregated categories of total risk disclosure. Results indicate that education of CEO (EDU_CEO) and education of CAC (EDU_CAC) have significant effects on the disclosure of environmental risk whereas only education of CAC (EDU_CAC) has significant effect on strategic risk disclosure. The tenure of both positions (TEN_CEO and TEN_CAC) has significant effects on the disclosure of strategic risk and environmental risk, respectively. Ethnicity of CEO (ETHN_CEO) and ethnicity of CAC (ETHN_CAC)

have a significant effect on the disclosure of operational and strategic risk information. For the financial risk disclosure, upper echelons characteristics are found to be unrelated to the disclosure of such information. The analysis also shows that only environmental risk disclosure is impacted by the existence of government as the owner.

Each of the relationships found in Table 5.7 is now discussed in turn, in respect of the hypotheses that are tested.

5.4.1.1 Upper Echelons and Total Risk Disclosure

5.4.1.1.1 Chief Executive Officer (CEO)

From the analyses in Table 5.7, the relationship between age of CEO (AGE_CEO) and total risk disclosure is negative and supports the contention that older managers are more conservative and have a tendency to not disclose more information on risk. Since older CEO are already established and obtain their place in society therefore they continue to choose a strategy that helps them maintain this position by disclosing less risk information. However, the coefficient is not statistically significant; hence, hypotheses H_{02A} is rejected. This result is inconsistent with previous studies by Bamber *et al.* (2010) and Bertrand and Schoar (2003) who found that older generation of managers develop more conservative disclosure styles in their decision-making.

Second, this study finds a significantly negative association between functional tracks of CEO (FUNCT_CEO) with total risk disclosure ($p < 10\%$). This suggests that CEO with experience in 'throughput functions' will disclose less information on risk. This finding is consistent with recent findings by Bamber *et al*. (2010) that report managers promoted from accounting and finance reflect elements of conservatism and distaste for ambiguity. Therefore, this finding supports hypothesis H_{03A}.

Third, it is found that the education of CEO (EDU_CEO) in terms of those holding a professional accounting qualification or an MBA qualification is significantly positively related to total risk disclosures. This result shows that managers with higher qualifications incline to disclose more risk information. However, the coefficient is not statistically significant thus allowing this study to reject hypotheses H_{04A}. This result is consistent with a study done by Ge *et al*. (2009).

Table 5.7: Multiple Regression Results – Baseline Model

$$MODEL\ 1:\ RD_{jt} = \beta_0 + \beta_1 AGE\_CEO_{jt} + \beta_2 AGE\_CAC_{jt} + \beta_3 FUNCT\_CEO_{jt} + \beta_4 FUNCT\_CAC_{jt} + \beta_5 EDU\_CEO_{jt} + \beta_6 EDU\_CAC_{jt} + \beta_7 TEN\_CEO_{jt} + \beta_8 TEN\_CAC_{jt} + \beta_9 ETHN\_CEO_{jt} + \beta_{10} ETHN\_CAC_{jt} + \beta_{11} FAMCTRL_{jt} + \beta_{12} GOVOWN_{jt} + \beta_{13} FOROWN_{jt} + \beta_{14} LNSIZE_{jt} + \beta_{15} LEV_{jt} + \beta_{16} BIG4_{jt} + \beta_{17} DUMMY\ (INDUSTRY) + \varepsilon_{jt}$$

	TOTAL RISK DISCLOSURE		OPERATIONAL RISK DISCLOSURE		ENVIRONMENTAL RISK DISCLOSURE		FINANCIAL RISK DISCLOSURE		STRATEGIC RISK DISCLOSURE	
	Coefficients	t-stat	Coefficients	t-stat	Coefficients	t-stat	Coefficients	t-stat	Coefficients	t-stat
(Constant)	-104.427	**-1.704***	-77.789	**-1.747***	-12.837	-1.565	13.220	0.489	-27.022	**-2.887****
AGE_CEO	-0.003	-0.033	0.031	0.342	-0.055	-0.560	-0.081	-0.752	0.078	0.821
AGE_CAC	-0.014	-0.140	-0.002	-0.023	0.063	0.573	-0.081	-0.675	0.068	0.645
FUNCT_CEO	-0.164	**-1.866***	-0.146	-1.638	-0.105	-1.079	-0.101	-0.947	-0.069	-0.745
FUNCT_CAC	-0.040	-0.464	-0.003	-0.030	-0.043	-0.449	-0.100	-0.959	0.025	0.270
EDU_CEO	0.028	0.305	0.104	1.135	-0.171	**-1.706***	-0.038	-0.350	-0.086	-0.897
EDU_CAC	0.079	0.795	0.034	0.339	0.235	**2.126****	-0.020	-0.164	0.233	**2.203****
TEN_CEO	-0.183	**-1.958***	-0.131	-1.385	-0.089	-0.861	-0.145	-1.287	-0.173	**-1.754***
TEN_CAC	0.067	0.687	0.072	0.729	-0.192	**-1.777***	0.154	1.307	-0.123	-1.191
ETHN_CEO	0.291	**2.938*****	0.331	**3.295*****	0.114	1.042	0.046	0.389	0.159	1.522
ETHN_CAC	0.025	0.311	-0.011	-0.135	0.092	1.049	-0.006	-0.066	0.164	**1.949***
FAMCTRL	-0.069	-0.773	-0.132	-1.456	0.035	0.351	0.049	0.452	0.024	0.252
GOVOWN	0.185	**1.854***	0.103	1.015	0.203	**1.848***	0.182	1.517	0.137	1.304
FOROWN	0.028	0.328	-0.017	-0.202	0.033	0.361	0.064	0.636	0.085	0.955

	TOTAL RISK DISCLOSURE		OPERATIONAL RISK DISCLOSURE		ENVIRONMENTAL RISK DISCLOSURE		FINANCIAL RISK DISCLOSURE		STRATEGIC RISK DISCLOSURE	
	Coefficients	t-stat	Coefficients	t-stat	Coefficients	t-stat	Coefficients	t-stat	Coefficients	t-stat
SIZE	0.349	**3.563*** **	0.260	**2.619*** **	0.294	**2.716*** **	0.244	**2.065** **	0.261	**2.519** **
LEV	-0.068	-0.676	-0.004	-0.040	-0.140	-1.262	-0.070	-0.577	-0.155	-1.460
BIG4	0.047	0.566	0.076	0.900	0.029	0.318	-0.068	-0.675	0.097	1.096
TRADSERV	0.152	0.370	0.177	0.424	-0.101	-0.223	-0.173	-0.349	0.700	1.610
CONSUMER	0.148	0.419	0.150	0.418	0.079	0.202	-0.130	-0.304	0.546	1.459
INDUSTRIAL	0.189	0.492	0.201	0.514	0.010	0.024	-0.080	-0.172	0.509	1.250
CONSTRUCTION	0.199	0.844	0.126	0.527	0.010	0.037	0.081	0.283	0.542	**2.171** **
PLANTATION	0.136	0.678	0.097	0.476	0.017	0.078	0.028	0.118	0.374	**1.768***
PROPERTY	0.145	0.687	0.071	0.334	0.228	0.981	0.019	0.074	0.409	**1.832***
INFRATECH	0.105	0.655	0.180	1.107	0.060	0.340	-0.155	-0.804	0.178	1.052
Adjusted R^2	0.314		0.295		0.164		0.005		0.233	
F-Value	**3.530*** **		**3.315*** **		**2.085*** **		1.030		**2.681*** **	
N	128	128	128	128	128	128	128	128	128	128

Notes:

***Significant at 0.01 level; **Significant at 0.05 level; *Significant at 0.1 level

RD = measured by risk disclosure score for year 2009, AGE_CEO = Age of CEO, AGE_CAC = Age of CAC, FUNCT_CEO = Functional track of CEO, FUNCT_CAC = Functional track of CAC, EDU_CEO = Education of CEO, EDU_CAC = Education of CAC, TEN_CEO = tenure of CEO, TEN_CAC = Tenure of CAC, ETHN_CEO = Ethnicity of CEO, ETHN_CAC = Ethnicity of CAC, FAMCTRL = Family ownership, GOVOWN = Government ownership, FOROWN = Foreign ownership, LNSIZE = Company size, LEV = Leverage, BIG4 = Auditor size, DUMMY (INDUSTRY) = Industry classification.

Fourth, the results provide support for the relationship between the CEO's tenure (TEN_CEO) with total risk disclosure, which reveals a negative significant relationship ($p < 10\%$). This finding suggests that long-tenured CEOs become devoted to their paradigm and avoid information that disconfirms this paradigm (Hambrick and Fukutomi, 1991). This result also indicates that the longer a CEO serves in affirm, the lower total risk disclosure is expected. Therefore, hypothesis H_{05A} can be accepted.

Finally, the relationship between ethnicity of CEO (ETHN_CEO) and total risk disclosure is positive, suggesting that greater risk disclosure is associated with Bumiputera CEOs. The coefficient is significant for the relationship between Bumiputera CEOs (ETHN_CEO) and total risk disclosure. Hence, hypothesis H_{06A} is accepted. This result is consistent with prior findings by Haniffa and Cooke (2002). They found a significant association between Bumiputera composition and voluntary disclosure for the Malaysian sample.

5.4.1.1.2 Chair of Audit Committee (CAC)

Table 5.7 reveals that all the variables of CAC characteristics have the predicted sign except for the variable tenure. The relationship between the tenure of CAC (TEN_CAC) and total risk disclosure is positive suggesting that the longer years CACs are in their position, the more corporate risk disclosure will occur. However, none of the variables have a significant relationship with total risk disclosure. Therefore, hypotheses H_{02B}, H_{03B}, H_{04B}, H_{05B} and H_{06B} are rejected. These results might infer that, the CAC's decisions are relatively secondary and subordinate to the CEO; therefore, the CEO might affect a company disclosure by putting pressure on the CAC in relation to risk disclosure decision making.

5.4.1.2 Upper Echelons Characteristics and Operational, Environmental, Financial and Strategic Risk Disclosures

As reported in Table 5.7, the individual results of risk disclosure types, namely operational risk disclosure, environmental risk disclosure, financial risk disclosure and strategic risk disclosure do not have any significant relationship with the age of CEO and CAC and the functional track of both CEO and CAC.

Perhaps, the most interesting finding is the influence of the education variable on risk disclosure. While earlier analysis reveals no significant findings on the association between education and total risk disclosure, segregating total risk disclosure into its four components reveals some significant results. Specifically, the results show a negative and significant coefficient with regard to the association between education of CEO (EDU_CEO) and environmental risk disclosure. Although the coefficient of EDU_CEO is significant at the 10 percent level, the coefficient is negative, which differs from the prior prediction of a positive relationship between education level and risk disclosure. However, the education of the CAC (EDU_CAC) is positively and significantly associated with both the environmental risk disclosure and strategic risk disclosure. These contradictory results require further explanation. This is considered in the discussion on Section 5.8.1.3.

The results reported in Table 5.7 indicate that tenure of CEO (TEN_CEO) and tenure of CAC (TEN_CAC), to some extent, have influence on the disclosure of risk information. Specifically, the results depict a negative and significant relation between the tenure variable and both environmental risk and strategic risk disclosure. These results are consistent with prior expectations.

As for the results regarding the ethnicity of CEO and CAC, it shows some influence on operational risk disclosure and strategic risk disclosure. Specifically, the results show positive and significant coefficient with regard to the association between ethnicity of CEO (ETHN_CEO) and operational and strategic risk disclosure. The positive result implies more disclosure on operational and strategic risk when the CEO and CAC are Bumiputera.

5.4.1.3 Ownership Characteristics and Total Risk Disclosure

Regarding family ownership, this study finds a negative direction on the association between family ownership (FAMCTRL) and total risk disclosure. Since the result is not significant, hypothesis H_{07} is rejected. This result is inconsistent with a study done by Liu and Sun (2010) who found a negative and significant relationship between family ownership and disclosure quality in the Chinese context. Similarly, Ho and Wong (2001), Chau and Gray (2002) and Haniffa and Cooke (2002) document evidence of a negative association between voluntary corporate disclosure and the proportion of

family members on the board within companies in Hong Kong and Singapore as well as Malaysia.

Interestingly, in the case of government ownership, this study finds a positive significant association between the government ownership (GOVOWN), measured by the proportion of government shareholders in the top 30 largest shareholders and total risk disclosure. In the total risk disclosure model, government ownership is found to be significant at the 10 percent level, thus hypothesis H_{08} is accepted. This supports the notion that the presence of government control reduces agency costs, possibly because they have greater monitoring power over the firm's activities. The result of this study is consistent with the prior studies by Wang *et al.* (2008) who reported a positive and significant relationship between state-owned shares and the overall disclosure and strategic information in China. Similarly, using Malaysian companies as a sample, Said *et al.* (2009) and Arshad *et al.* (2012) find a positive and significant relationship between government ownership and corporate social responsibility disclosure and corporate risk disclosure (i.e. quantity and quality risk disclosure), respectively.

The relationship between foreign ownership (FOROWN) and total risk disclosure is positive and supports the argument of the previous research findings that it is possible that foreign investors can influence corporate disclosure practices by disclosing more information. However, the coefficient is not statistically significant, hence, hypothesis H_{09} is rejected. The result is inconsistent with prior findings by Wang *et al.* (2008) who found a significant positive relationship between the proportion of foreign ownership and the level of strategic voluntary disclosure for a Chinese sample. Similarly, in the Malaysian context, Haniffa and Cooke (2002) find a positive association between foreign ownership and voluntary disclosure. However, the result in this study is consistent with the findings by Said *et al*. (2009) in relation to corporate social responsibility disclosure using Malaysian evidence.

5.4.1.4 Control Variables and Corporate Risk Disclosure

Turning to the control variables, only company size (LNSIZE) is found to be positively and significantly related to total risk disclosure at the 1 percent level. This result is as expected since larger sized firms will have greater risk disclosure as they are more closely monitored by the external markets. This result is consistent with other studies in

the Malaysian context such as Amran *et al.* (2009) and Ismail and Abdul Rahman (2011).

The effect of leverage (LEV) which is the popular proxy for risk was found to be negative but not significant. Leverage is used as a control variable for firms that are currently facing financial difficulties because firms with higher leverage are expected to disclose more information (Aljifri and Hussainey, 2007) since there is higher monitoring costs by firms and at the same time to satisfy the need of creditors (Jensen and Meckling, 1976). However, the insignificant relationship differs from the prior prediction of a positive relationship between firm leverage and corporate risk disclosure.

The effect of auditor size (BIG4) on corporate risk disclosure is predicted to be positive. The Big 4 audit firms are expected to encourage companies to enhance the extent of risk information disclosure as they have their reputation (Chalmers and Godfrey, 2004), based on the observed dominance of large audit firms in the market for publicly held companies. However, the auditor size (BIG4) variable is found to be positive in sign but was not significant.

Finally, the effect of industry is found to have no significant effect on total risk disclosure. This result is inconsistent with a study done by Amran *et al.* (2009) who found that infrastructure and technology industries were found to be positively and significantly related to risk management disclosure within the Malaysian context.

5.5 ADDITIONAL ANALYSES FOR DETERMINANTS OF CORPORATE RISK DISCLOSURE

To ascertain the credibility of the initial analysis presented in Table 5.7, several additional analysis tests are carried out. These additional tests are conducted to determine the sensitivity of the results as well as to determine the robustness of the findings reported earlier in Section 5.4. The first test repeats the regression model (*Model 1*) using a different proxy to measure managers' age characteristics. Then, the baseline model is further tested by creating new variables for education namely, professional accounting qualifications and MBA qualifications, to examine the

influence of the managers' specific higher education on improving risk disclosure. Finally, the baseline model is further re-examined to test the robustness of the regression analysis performed earlier, by replacing the model with the separate upper echelons model and ownership model.

5.5.1 Alternative Measurement for Age – Dichotomous Variable

In the baseline model, the age variable (AGE) is treated as a continuous variable and it appears that using the actual age of CEO and CAC is not significantly associated with risk disclosure. To further investigate this issue, this study explores the possibility of CEO and CAC having an influence on risk disclosure when they are divided into age cohort (Bamber *et al.*, 2010). Perhaps, the results of age may have been improved if the variable is treated as a dichotomous variable using this age cohort. Following studies done by Bamber *et al.* (2010), this study uses World War II (WWII) event as a cut of point. The variable takes a value of one if the CEO and CAC were born before WWII; otherwise it takes a value of 0.

The results reported in Table 5.8 indicate that none of the coefficients of age cohort of CEO and CAC treated as a dummy variable (AGE_CEO_DUMMY) and (AGE_CAC_DUMMY) are statistically significant for each of the types of risk disclosure (operational risk, environmental risk, financial risk and strategic risk) as well as for the total risk disclosure. Other individual results are not significantly different from those in the earlier models. This suggests that age of the CEO and CAC is not an effective predictor of the extent of risk disclosure.

5.5.2 Education of CEO and CAC – Professional Accounting Qualifications and MBA Qualifications

Consistent with prior studies such as Ge *et al*. (2009), this study does not find any significant association between education and total risk disclosure. Perhaps, the insignificant findings may be due to the lack of the CEO or CAC to influence the disclosure of risk information in general regardless of their higher education level. However, the initial analysis found that the education level of CEO and CAC does influence the disclosure of environmental risk and strategic risk information. Since

Table 5.8: Multiple Regression Results – Age using Dummies

MODEL 2: $RD_{jt} = \beta_0 + \beta_1 AGE\_CEO\_DUMMY_{jt} + \beta_2 AGE\_CAC\_DUMMY_{jt} + \beta_3 FUNCT\_CEO_{jt} + \beta_4 FUNCT\_CAC_{jt} + \beta_5 EDU\_CEO_{jt} + \beta_6 EDU\_CAC_{jt} + \beta_7 TEN\_CEO_{jt} + \beta_8 TEN\_CAC_{jt} + \beta_9 ETHN\_CEO_{jt} + \beta_{10} ETHN\_CAC_{jt} + \beta_{11} FAMCTRL_{jt} + \beta_{12} GOVOWN_{jt} + \beta_{13} FOROWN_{jt} + \beta_{14} LNSIZE_{jt} + \beta_{15} LEV_{jt} + \beta_{16} BIG4_{jt} + \beta_{17} DUMMY\ (INDUSTRY) + \varepsilon_{jt}$

	TOTAL RISK DISCLOSURE		OPERATIONAL RISK DISCLOSURE		ENVIRONMENTAL RISK DISCLOSURE		FINANCIAL RISK DISCLOSURE		STRATEGIC RISK DISCLOSURE	
	Coefficients	t-stat	Coefficients	t-stat	Coefficients	t-stat	Coefficients	t-stat	Coefficients	t-stat
(Constant)	-105.982	**-1.843***	-72.367	**-1.733***	-13.200	**-1.715***	2.543	0.100	-22.957	**-2.603****
AGE_CEO_DUMMY	0.026	0.298	0.057	0.640	0.038	0.389	-0.056	-0.526	0.009	0.095
AGE_CAC_DUMMY	0.007	0.079	0.002	0.019	0.067	03674	-0.034	-0.314	0.071	0.745
FUNCT_CEO	-0.164	**-1.873***	-0.148	**-1.675***	-0.112	-1.167	-0.091	-0.857	-0.073	-0.788
FUNCT_CAC	-0.038	-0.438	0.007	0.081	-0.031	-0.322	-0.118	-1.113	0.024	0.259
EDU_CEO	0.021	0.235	0.095	1.047	-0.165	**-1.673***	-0.042	-0.385	-0.080	-0.850
EDU_CAC	0.083	0.857	0.034	0.350	0.221	**2.070****	-0.007	-0.060	0.235	**2.298****
TEN_CEO	-0.193	**-2.092****	-0.139	-1.482	-0.120	-1.175	-0.158	-1.417	-0.147	-1.502
TEN_CAC	0.054	0.565	0.064	0.653	-0.204	**-1.921***	0.136	1.170	-0.114	-1.116
ETHN_CEO	0.290	**2.946*****	0.333	**3.346*****	0.119	1.100	0.030	0.253	0.175	**1.677***
ETHN_CAC	0.020	0.249	-0.014	-0.172	0.082	0.924	-0.011	-0.111	0.166	**1.953***
FAMCTRL	-0.072	-0.818	-0.130	-1.457	0.026	0.268	0.032	0.299	0.043	0.463
GOVOWN	0.190	**1.925***	0.104	1.043	0.218	**2.003****	0.194	1.626	0.122	1.165
FOROWN	0.028	0.340	-0.016	-0.193	0.045	0.489	0.063	0.623	0.080	0.906

	TOTAL RISK DISCLOSURE		OPERATIONAL RISK DISCLOSURE		ENVIRONMENTAL RISK DISCLOSURE		FINANCIAL RISK DISCLOSURE		STRATEGIC RISK DISCLOSURE	
	Coefficients	t-stat	Coefficients	t-stat	Coefficients	t-stat	Coefficients	t-stat	Coefficients	t-stat
LNSIZE	0.344	**3.545*** **	0.257	**2.615*** **	0.292	**2.728*** **	0.233	**1.985** **	0.270	**2.617*** **
LEV	-0.067	-0.660	-0.002	-0.016	-0.141	-1.267	-0.067	-0.549	-0.164	-1.532
BIG4	0.053	0.623	0.088	1.008	0.044	0.466	-0.079	-0.763	0.099	1.090
TRADSERV	0.156	0.383	0.168	0.406	-0.070	-0.155	-0.135	-0.273	0.651	1.502
CONSUMER	0.151	0.430	0.145	0.406	0.100	0.257	-0.102	-0.240	0.504	1.349
INDUSTRIAL	0.191	0.499	0.189	0.489	0.036	0.086	-0.044	-0.094	0.461	1.138
CONSTRUCTION	0.204	0.871	0.125	0.528	0.034	0.133	0.098	0.347	0.512	**2.06** **
PLANTATION	0.142	0.710	0.100	0.493	0.035	0.158	0.040	0.164	0.356	**1.679***
PROPERTY	0.153	0.726	0.076	0.355	0.255	1.097	0.030	0.117	0.392	**1.756***
INFRATECH	0.107	0.672	0.176	1.096	0.075	0.428	-0.139	-0.726	0.155	0.922
Adjusted R^2	0.315		0.297		0.165		-0.002		0.228	
F-Value	**3.536*** **		**3.337*** **		**2.093*** **		0.987		**2.631*** **	
N	128	128	128	128	128	128	128	128	128	128

Notes:

***Significant at 0.01 level; **Significant at 0.05 level; *Significant at 0.1 level

RD = measured by risk disclosure score for year 2009, AGE_CEO_DUMMY = Age of CEO (dummy), AGE_CAC_DUMMY = Age of CAC (dummy), FUNCT_CEO = Functional track of CEO, FUNCT_CAC = Functional track of CAC, EDU_CEO = Education of CEO, EDU_CAC = Education of CAC, TEN_CEO = tenure of CEO, TEN_CAC = Tenure of CAC, ETHN_CEO = Ethnicity of CEO, ETHN_CAC = Ethnicity of CAC, FAMCTRL = Family ownership, GOVOWN = Government ownership, FOROWN = Foreign ownership, LNSIZE = Company size, LEV = Leverage, BIG4 = Auditor size, DUMMY (INDUSTRY) = Industry classification

these results on education level show conflicting outcome, it may have been different if the variable is segregated into two different variables namely, professional accounting qualifications and MBA qualifications.

Consistent with prior study by Ge *et al.* (2009), the variable education is measured using an indicator variable with the value of one if the CEO and CAC holding a professional accounting qualification (CPA) and 0 otherwise. The variable education is also measured using an indicator variable with the value of one if the CEO and CAC hold an MBA qualification and 0 otherwise. Variables labelled as CPA_CEO, MBA_CEO, CPA_CAC and MBA_CAC are incorporated into the regression model. If the assumption is true, the coefficients of all the new created variables are expected to be positive and significant. The results are shown in Table 5.9.

As reported in Table 5.9, the total risk disclosure results as well as the individual risk disclosure results do not change significantly from the baseline model (*Model 1*). As for the results regarding education, treating the education variable as two different types (professional accounting qualifications and MBA qualifications) does give some significant results. The table shows a significant positive coefficient for the association between CAC holding professional accounting qualifications (CPA) and both environmental and strategic risk disclosures. The coefficient of CPA_CAC is significant at the 5 percent level and 1 percent level, respectively. These results support the prior prediction of a positive relationship between CAC with a professional accounting qualifications and risk disclosure. Although CEO education is significant in the baseline model (*Model 1*), the association is not significant anymore in this regression. This suggests that the presence of CAC who hold professional accounting qualifications is likely to be an effective measure to achieve higher environmental risk disclosure and strategic risk disclosure.

Table 5.9: Multiple Regression Results – Professional Accounting Qualifications and MBA Qualifications

$$MODEL\ 3: RD_{jt} = \beta_0 + \beta_1 AGE\_CEO_{jt} + \beta_2 AGE\_CAC_{jt} + \beta_3 FUNCT\_CEO_{jt} + \beta_4 FUNCT\_CAC_{jt} + \beta_5 CPA\_CEO_{jt} + \beta_6 MBA\_CEO_{jt} + \beta_7 CPA\_CAC_{jt} + \beta_8 MBA\_CAC_{jt} + \beta_9 TEN\_CEO_{jt} + \beta_{10} TEN\_CAC_{jt} + \beta_{11} ETHN\_CEO_{jt} + \beta_{12} ETHN\_CAC_{jt} + \beta_{13} FAMCTRL_{jt} + \beta_{14} GOVOWN_{jt} + \beta_{15} FOROWN_{jt} + \beta_{16} LNSIZE_{jt} + \beta_{17} LEV_{jt} + \beta_{18} BIG4_{jt} + \beta_{19} DUMMY\ (INDUSTRY) + \varepsilon_{jt}$$

	TOTAL RISK DISCLOSURE		OPERATIONAL RISK DISCLOSURE		ENVIRONMENTAL RISK DISCLOSURE		FINANCIAL RISK DISCLOSURE		STRATEGIC RISK DISCLOSURE	
	Coefficients	t-stat	Coefficients	t-stat	Coefficients	t-stat	Coefficients	t-stat	Coefficients	t-stat
(Constant)	-116.104	**-1.867***	-82.894	**-1.825***	-13.903	**-1.663***	10.128	0.367	-29.434	**-3.114****
AGE_CEO	0.000	-0.004	0.033	0.359	-0.051	-0.511	-0.078	-0.723	0.076	0.813
AGE_CAC	0.010	0.099	0.013	0.126	0.073	0.648	-0.062	-0.499	0.100	0.928
FUNCT_CEO	-0.163	**-1.841***	-0.145	-1.610	-0.105	-1.073	-0.102	-0.950	-0.061	-0.658
FUNCT_CAC	-0.067	-0.750	-0.020	-0.216	-0.056	-0.563	-0.123	-1.143	-0.006	-0.063
CPA_CEO	0.062	0.721	0.108	1.237	-0.112	-1.175	0.020	0.194	-0.066	-0.730
MBA_CEO	-0.033	-0.363	0.044	0.474	-0.166	-1.633	-0.093	-0.840	-0.074	-0.770
CPA_CAC	0.129	1.228	0.065	0.610	0.255	**2.190****	0.020	0.160	0.304	**2.747****
MBA_CAC	-0.018	-0.217	-0.020	-0.246	0.067	0.752	-0.034	-0.350	0.009	0.109
TEN_CEO	-0.188	**-1.994****	-0.134	-1.397	-0.095	-0.910	-0.152	-1.337	-0.169	**-1.702***
TEN_CAC	0.060	0.612	0.067	0.673	-0.198	**-1.817***	0.149	1.255	-0.130	-1.256
ETHN_CEO	0.287	**2.846*****	0.328	**3.186*****	0.119	1.064	0.047	0.386	0.144	1.352
ETHN_CAC	0.025	0.310	-0.011	-0.129	0.088	0.988	-0.009	-0.093	0.174	**2.058****
FAMCTRL	-0.053	-0.581	-0.122	-1.316	0.048	0.474	0.061	0.552	0.045	0.476

	TOTAL RISK DISCLOSURE		OPERATIONAL RISK DISCLOSURE		ENVIRONMENTAL RISK DISCLOSURE		FINANCIAL RISK DISCLOSURE		STRATEGIC RISK DISCLOSURE	
	Coefficients	t-stat	Coefficients	t-stat	Coefficients	t-stat	Coefficients	t-stat	Coefficients	t-stat
GOVOWN	0.181	**1.816***	0.101	0.990	0.201	**1.818***	0.177	1.467	0.137	1.304
FOROWN	0.020	0.235	-0.022	-0.256	0.031	0.324	0.052	0.499	0.093	1.033
LNSIZE	0.358	**3.630*****	0.265	**2.639*****	0.303	**2.774*****	0.248	**2.081****	0.278	**2.681*****
LEV	-0.103	-0.985	-0.027	-0.255	-0.159	-1.368	-0.104	-0.819	-0.183	**-1.661***
BIG4	0.060	0.695	0.084	0.965	0.035	0.370	-0.051	-0.488	0.093	1.031
TRADSERV	0.194	0.470	0.204	0.485	-0.079	-0.172	-0.128	-0.257	0.724	**1.665***
CONSUMER	0.171	0.482	0.164	0.455	0.096	0.243	-0.111	-0.258	0.570	1.526
INDUSTRIAL	0.215	0.558	0.217	0.552	0.027	0.064	-0.056	-0.119	0.531	1.307
CONSTRUCTION	0.212	0.894	0.134	0.555	0.020	0.078	0.094	0.330	0.544	**2.185****
PLANTATION	0.159	0.787	0.111	0.539	0.033	0.149	0.056	0.230	0.380	**1.785***
PROPERTY	0.155	0.734	0.078	0.362	0.235	1.003	0.031	0.121	0.412	**1.850***
INFRATECH	0.139	0.849	0.202	1.214	0.079	0.436	-0.126	-0.638	0.211	1.229
Adjusted R^2	0.312		0.286		0.154		--0.005		0.238	
F-Value	**3.304*****		**3.034*****		**1.925*****		0.973		**2.591*****	
N	128	128	128	128	128	128	128	128	128	128

Notes:

***Significant at 0.01 level; **Significant at 0.05 level; *Significant at 0.1 level

RD = measured by risk disclosure score for year 2009, AGE_CEO = Age of CEO, AGE_CAC = Age of CAC, FUNCT_CEO = Functional track of CEO, FUNCT_CAC = Functional track of CAC, CPA_CEO = CEO holding professional qualifications, MBA_CEO = CEO holding MBA qualifications, CPA_CAC = CAC holding professional qualifications, MBA_CAC = CAC holding MBA qualifications, TEN_CEO = Tenure of CEO, TEN_CAC = Tenure of CAC, ETHN_CEO = Ethnicity of CEO, ETHN_CAC = Ethnicity of CAC, FAMCTRL = Family ownership, GOVOWN = Government ownership, FOROWN = Foreign ownership , LNSIZE = Company size, LEV = Leverage, BIG4 = Auditor size, DUMMY (INDUSTRY) = Industry classification

5.5.3 Multiple Regression Results – Re-examination

Results reported in all regression models earlier suggest that certain upper echelons and ownership characteristics have a significant impact on risk disclosure. Thus to determine the stability of the findings, the multiple regression results of the baseline model are re-examined by a) leaving out all of the ownership variables and b) leaving out the entire upper echelons variables. Thus, upper echelons model and ownership model are created separately.

5.5.3.1 Upper Echelons Model

As noted in Table 5.10, the overall results without the ownership variables does not change significantly from the baseline model, except for functional track of CEO variable, which is now statistically insignificant. In fact, the findings suggest consistent results regarding the direction and significance level for each of the coefficients of the tested variables. Furthermore, it can be seen that the adjusted R^2 and the *F*-value for the total risk disclosure, involve a slight decrease compared to the baseline model (Table 5.7). The findings thus indicate that the use of the baseline model instead of the upper echelons model produces better explanatory power.

5.5.3.2 Ownership Model

Another alternative approach is leaving out the upper echelons variables. Therefore, the baseline model is replaced by the ownership model. The results are presented in Table 5.11. The *F*-value for the total risk disclosure for the multiple regression results using the ownership model is statistically significant at the 1 percent level. The adjusted R^2 is 24.8 percent for the total risk disclosure. The results in Table 5.11 show a better result for the ownership variables compared to the prior analysis using the baseline model. Apart from government ownership, family ownership appears to be negatively and significantly related to risk disclosure. Prior literature on the relation between family control on the corporate board and disclosure (see e.g. Haniffa and Cooke, 2002) reports a similar result to this study. Therefore, support is given to the prediction of agency theory in which the majority of family member on the board will bring about less disclosure of risk information due to their ability to get inside information in the capacity as a family member.

Table 5.10: Multiple Regression Results – Upper Echelons Model

MODEL 4: $RD_{jt} = \beta_0 + \beta_1 AGE\_CEO_{jt} + \beta_2 AGE\_CAC_{jt} + \beta_3 FUNCT\_CEO_{jt} + \beta_4 FUNCT\_CAC_{jt} + \beta_5 EDU\_CEO_{jt} + \beta_6 EDU\_CAC_{jt} + \beta_7 TEN\_CEO_{jt} + \beta_8 TEN\_CAC_{jt} + \beta_9 ETHN\_CEO_{jt} + \beta_{10} ETHN\_CAC_{jt} + \beta_{11} LNSIZEjt + \beta_{12} LEV_{jt} + \beta_{13} BIG4_{jt} + \beta_{14} DUMMY\ (INDUSTRY) + \varepsilon_{jt}$

	TOTAL RISK DISCLOSURE		OPERATIONAL RISK DISCLOSURE		ENVIRONMENTAL RISK DISCLOSURE		FINANCIAL RISK DISCLOSURE		STRATEGIC RISK DISCLOSURE	
	Coefficients	t-stat	Coefficients	t-stat	Coefficients	t-stat	Coefficients	t-stat	Coefficients	t-stat
(Constant)	-125.333	**-2.067****	-88.074	**-2.008****	-15.320	**-1.893***	6.898	0.259	-28.837	**-3.139*****
AGE_CEO	-0.048	-0.557	-0.008	-0.094	-0.082	-0.870	-0.107	-1.040	0.050	0.551
AGE_CAC	-0.019	-0.187	-0.011	-0.109	0.060	0.544	-0.079	-0.662	0.076	0.724
FUNCT_CEO	-0.138	-1.588	-0.115	-1.312	-0.095	-0.991	-0.095	-0.914	-0.064	-0.698
FUNCT_CAC	-0.014	-0.159	0.025	0.289	-0.026	-0.279	-0.090	-0.875	0.031	0.351
EDU_CEO	0.028	0.312	0.097	1.055	-0.160	-1.604	-0.027	-0.252	-0.080	-0.838
EDU_CAC	0.103	1.039	0.051	0.508	0.261	**2.395****	-0.001	-0.005	0.242	**2.336****
TEN_CEO	-0.162	**-1.739***	-0.118	-1.252	-0.069	-0.671	-0.127	-1.136	-0.159	-1.621
TEN_CAC	0.094	0.971	0.091	0.937	-0.163	-1.535	0.175	1.519	-0.112	1.110
ETHN_CEO	0.379	**4.296*****	0.411	**4.619*****	0.176	**1.809***	0.094	0.890	0.197	**2.129****
ETHN_CAC	0.027	0.331	-0.013	-0.162	0.098	1.111	-0.001	-0.007	0.168	**2.003****
LNSIZE	0.402	**4.239*****	0.296	**3.089*****	0.344	**3.292*****	0.288	**2.539****	0.297	**2.982*****
LEV	-0.073	-0.732	-0.011	-0.113	-0.137	-1.236	-0.069	-0.578	-0.160	-1.525
BIG4	0.055	0.658	0.071	0.850	0.042	0.465	-0.050	-0.505	0.116	1.338
TRADSERV	0.169	0.408	0.188	0.451	-0.083	-0.182	-0.159	-0.322	0.707	1.632

	TOTAL RISK DISCLOSURE		OPERATIONAL RISK DISCLOSURE		ENVIRONMENTAL RISK DISCLOSURE		FINANCIAL RISK DISCLOSURE		STRATEGIC RISK DISCLOSURE	
	Coefficients	t-stat	Coefficients	t-stat	Coefficients	t-stat	Coefficients	t-stat	Coefficients	t-stat
CONSUMER	0.159	0.446	0.153	0.427	0.095	0.242	-0.116	-0.273	0.554	1.484
INDUSTRIAL	0.168	0.435	0.167	0.429	0.009	0.022	-0.074	-0.160	03513	1.266
CONSTRUCTION	0.173	0.731	0.111	0.464	-0.016	-0.063	0.056	0.197	0.520	**2.096****
PLANTATION	0.146	0.725	0.100	0.494	0.034	0.153	0.041	0.170	0.379	1.801
PROPERTY	0.137	0.647	0.051	0.238	0.232	1.000	0.031	0.121	0.422	**1.907***
INFRATECH	0.100	0.623	0.166	1.025	0.061	0.347	-0.147	-0.768	0.190	1.129
Adjusted R^2	0.307		0.294		0.160		0.008		0.237	
F-Value	**3.809*****		**3.643*****		**2.210*****		1.053		**2.977*****	
N	128	128	128	128	128	128	128	128	128	128

Notes:

***Significant at 0.01 level; **Significant at 0.05 level; *Significant at 0.1 level

RD = measured by risk disclosure score for year 2009, AGE_CEO = Age of CEO, AGE_CAC = Age of CAC, FUNCT_CEO = Functional track of CEO, FUNCT_CAC = Functional track of CAC, EDU_CEO = Education of CEO, EDU_CAC = Education of CAC, TEN_CEO = Tenure of CEO, TEN_CAC = Tenure of CAC, ETHN_CEO = Ethnicity of CEO, ETHN_CAC = Ethnicity of CAC, LNSIZE = Company size, LEV = Leverage, BIG4 = Auditor size, DUMMY (INDUSTRY) = Industry classification

Table 5.11: Multiple Regression Results – Ownership Model

MODEL 5: $RD_{jt} = \beta_0 + \beta_1 FAMCTRL_{jt} + \beta_2 GOVOWN_{jt} + \beta_3 FOROWN_{jt} + \beta_4 LNSIZE_{jt} + \beta_5 LEV_{jt} + \beta_6 BIG4_{jt} + \beta_7 DUMMY\ (INDUSTRY) + \varepsilon_{jt}$

	TOTAL RISK DISCLOSURE		OPERATIONAL RISK DISCLOSURE		ENVIRONMENTAL RISK DISCLOSURE		FINANCIAL RISK DISCLOSURE		STRATEGIC RISK DISCLOSURE	
	Coefficients	t-stat	Coefficients	t-stat	Coefficients	t-stat	Coefficients	t-stat	Coefficients	t-stat
(Constant)	-78.610	-1.381	-59.067	-1.434	-6.883	-0.899	1.671	0.070	-14.331	**-1.627***
FAMCTRL	-0.145	**-1.698***	-0.209	**-2.433****	-0.020	-0.212	0.033	0.344	-0.031	-0.344
GOVOWN	0.297	**3.241*****	0.233	**2.519****	0.247	**2.434****	0.188	**1.805***	0.215	**2.193****
FOROWN	0.005	0.064	-0.041	-0.482	0.014	0.144	0.074	0.765	0.043	0.479
LNSIZE	0.301	**3.089*****	0.232	**2.358****	0.228	**2.113****	0.213	**1.924***	0.200	**1.921***
LEV	-0.035	-0.347	0.026	0.257	-0.128	-1.139	-0.040	-0.346	-0.165	-1.522
BIG4	0.034	0.393	0.082	0.950	-0.035	-0.366	-0.076	-0.781	0.048	0.522
TRADSERV	0.068	0.163	0.148	0.352	-0.317	-0.685	-0.200	-0.422	0.511	1.143
CONSUMER	0.023	0.063	0.077	0.213	-0.175	-0.439	-0.154	-0.376	0.310	0.806
INDUSTRIAL	0.100	0.255	0.157	0.397	-0.217	-0.500	-0.087	-0.196	0.316	0.755
CONSTRUCTION	0.113	0.480	0.078	0.330	-0.157	-0.603	0.047	0.174	0.408	1.620
PLANTATION	0.025	0.126	0.033	0.163	-0.167	-0.751	-0.017	-0.077	0.196	0.910
PROPERTY	0.081	0.380	0.032	0.149	0.068	0.285	0.028	0.114	0.275	1.203
INFRATECH	0.088	0.539	0.155	0.944	0.030	0.164	-0.127	-0.686	0.135	0.779

	TOTAL RISK DISCLOSURE		OPERATIONAL RISK DISCLOSURE		ENVIRONMENTAL RISK DISCLOSURE		FINANCIAL RISK DISCLOSURE		STRATEGIC RISK DISCLOSURE	
	Coefficients	t-stat	Coefficients	t-stat	Coefficients	t-stat	Coefficients	t-stat	Coefficients	t-stat
Adjusted R^2	0.248		0.234		0.075		0.028		0.138	
F-Value	**4.233*** **		**3.988*** **		**1.793** **		1.279		**2.565*** **	
N	128	128	128	128	128	N	128	128	128	128

Notes:

***Significant at 0.01 level; **Significant at 0.05 level; *Significant at 0.1 level.

RD = measured by risk disclosure score for year 2009, FAMCTRL = Family ownership, GOVOWN = Government ownership, FOROWN = Foreign ownership, LNSIZE = Company size, LEV = Leverage, BIG4 = Auditor size, DUMMY (INDUSTRY) = Industry classifications.

5.6 MULTIVARIATE ANALYSES FOR VALUE RELEVANCE OF RISK DISCLOSURE

5.6.1 Total Risk Disclosure and Firm Value

Table 5.12 tests the value relevance of total risk disclosure in the share market. The results of regression analysis of *Model 6* (Table 5.12) show that the *F*-value is statistically significant at the 1 percent level with the R^2 of 71.0 percent (Adjusted R^2 = 65.3 percent). The statistics show that the model explained 65.3 percent of the variation in share price of the firm in 2009. Although the adjusted R^2 may be considered high, it is however, lower than that reported in the previous Malaysian study by Ismail *et al*. (2012), who examined the influence of voluntary risk disclosure on firm's market value, which was 83.7 percent.

Table 5.12

Multiple Regression Results – Value Relevance of Total Risk Disclosure

MODEL 6: $SP_{jt} = \beta_0 + \beta_1 EPS_{jt} + \beta_2 BVNAS_{jt} + \beta_3 TRD_{jt} + \beta_4 TRD*FAMCTRL\_20_{jt} + \beta_5 TRD*GOVCTRL\_20_{jt} + \beta_6 TRD*FORCTRL\_20_{jt} + \varepsilon_{jt}$

Dependent	Share Price (180 days after financial year end)		
R^2	0.71		
Adjusted R^2	0.653		
F-Value	37.419		
Model Sig.	**0.000**		
	Coefficient	t-stat	Sig.
Constant	-0.898	-0.829	0.409
EPS	0.798	13.018	**0.000**
BVNAS	0.096	1.610	0.110
TRD	0.070	0.939	0.350
TRD*FAMCTRL_20	0.104	1.685	**0.095**
TRD*GOVCTRL_20	0.043	0.563	0.575
TRD*FORCTRL_20	-0.108	-1.925	**0.057**

Notes: SP = measured by share price (180 days after the financial year end), EPS = Earnings per share, BVNAS = Book value of net assets per share, TRD = Total risk disclosure, FAMCTRL_20 = Family-controlled firm, GOVCTRL_20 = Government-controlled firm, FORCTRL_20 = Foreign-controlled firm

Model 6 in Table 5.12 indicates the increased in total risk disclosure (TRD) positively influences firm's share price in year 2009. However, the coefficient is not statistically significant, hence, hypotheses H_{10A} can be rejected. This result is consistent with a

previous study by Ismail *et al.* (2012) who found that quantitative voluntary risk disclosure has no significant relationship with share prices.

The model in Table 5.12 also includes interaction terms between total risk disclosure and family-controlled firms (TRD*FAMCTRL_20), total risk disclosure and government-controlled firms (TRD*GOVCTRL_20) and total risk disclosure and foreign-controlled firms (TRD*FORCTRL_20). From Table 5.12, it is shown that the two interaction terms between total risk disclosure and family-controlled firms (TRD*FAMCTRL_20) and foreign-controlled firms (TRD*FORCTRL_20) are related to market value. This outcome further emphasizes that companies with greater family control and higher total risk disclosure will tend to have higher firm values. In contrast, companies that is foreign-controlled and has higher total risk disclosure, tend to have lower firm values. One plausible explanation might be because investors have a different perception towards foreign-controlled companies in Malaysia.

5.6.2 Regulated Risk Disclosure and Firm Value

The results reported in Table 5.13 are related to the value relevance of regulated risk disclosure (RRD). As noted in Table 5.13, the overall results for the regulated risk disclosures do not change significantly from the previous model (*Model 6*) except for the negative coefficient of regulated risk disclosure. This indicates that higher regulated risk disclosure has a negative impact on firm value. However, the result is not statistically significant; hence hypothesis H_{10B} is rejected.

Further, from Table 5.13 it is found that the interaction term between regulated risk disclosure and foreign-controlled firm (RRD*FORCTRL_20) is significant at 10 percent level. The results show a negative and significant result for the interactions between regulated risk disclosure and foreign-controlled firm (RRD*FORCTRL_20) with the firm value. Greater regulated risk information disclosed reduces the market value of foreign-controlled companies in Malaysia. One plausible explanation for the trade-off which could weaken the investors' perspectives is the risk information that foreign-controlled companies disclose are more towards compliance with the accounting standards which is just a plain statement without the actual condition faced by the companies.

Table 5.13

Multiple Regression Results – Value Relevance of Regulated Risk Disclosure

MODEL 7: $SP_{jt} = \beta_0 + \beta_1 EPS_{jt} + \beta_2 BVNAS_{jt} + \beta_3 RRD_{jt} + \beta_4 RRD*FAMCTRL\_20_{jt} + \beta_5 RRD*GOVCTRL\_20_{jt} + \beta_6 RRD*FORCTRL\_20_{jt} + \varepsilon_{jt}$

Dependent	Share Price (180 days after financial year end)		
R^2	0.665		
Adjusted R^2	0.647		
F-Value	36.365		
Model Sig.	**0.000**		
	Coefficient	t-stat	Sig.
Constant	0.226	0.198	0.843
EPS	0.791	12.938	**0.000**
BVNAS	0.119	2.016	**0.046**
RRD	-0.010	-0.158	0.875
RRD*FAMCTRL_20	0.087	1.344	**0.082**
RRD*GOVCTRL_20	0.070	1.047	0.297
RRD*FORCTRL_20	-0.097	-1.700	**0.092**

Notes: SP = measured by share price (180 days after the financial year end), EPS = Earnings per share, BVNAS = Book value of net assets per share, RRD = Regulated risk disclosure, FAMCTRL_20 = Family-controlled firm, GOVCTRL_20 = Government-controlled firm, FORCTRL _20 = Foreign-controlled firm

5.6.3 Non-Regulated Risk Disclosure and Firm Value

The results presented in Table 5.14 are related to the value relevance of non-regulated risk disclosure. This study also does not find a significant association between non-regulated risk disclosure (NRD) and firm value. Although the direction of the coefficient of non-regulated risk disclosure is positive, the coefficient is not significant; therefore, hypothesis H_{10C} is rejected.

In terms of the association between the interaction terms of non-regulated risk disclosure and family-controlled firms (NRRD*FAMCTRL_20) and non-regulated risk disclosure and foreign-controlled firms (NRRD*FORCTRL_20), significance is found. These interaction results are consistent with the results found in *Model 6*.

Table 5.14

Multiple Regression Results – Value Relevance of Non-Regulated Risk Disclosure

MODEL 8: $SP_{jt} = \beta_0 + \beta_1 EPS_{jt} + \beta_2 BVNAS_{jt} + \beta_3 NRRD_{jt} + \beta_4 NRRD*FAMCTRL\_20_{jt} + \beta_5 NRRD*GOVCTRL\_20_{jt} + \beta_6 NRRD*FORCTRL\_20_{jt} + \varepsilon_{jt}$

Dependent	Share Price (180 days after financial year end)		
R^2	0.674		
Adjusted R^2	0.657		
F-Value	36.968		
Model Sig.	**0.000**		
	Coefficient	t-stat	Sig.
Constant	-0.674	-0.842	0.402
EPS	0.799	13.036	**0.000**
BVNAS	0.088	1.483	0.141
NRRD	0.081	1.073	0.285
NRRD*FAMCTRL_20	0.122	2.006	**0.047**
NRRD*GOVCTRL_20	0.045	0.579	0.564
NRRD*FORCTRL_20	-0.110	-1.973	**0.051**

Notes: SP = measured by share price (180 days after the financial year end), EPS = Earnings per share, BVNAS = Book value of net assets per share, NRRD = Non-regulated risk disclosure, FAMCTRL_20 = Family-controlled firm, GOVCTRL_20 = Government-controlled firm, FORCTRL_20 = Foreign-controlled firm

5.7 ENDOGENEITY TEST

Research that models and tests the relationship between corporate outcomes (such as the level of financial performance or extent of corporate disclosure) and various governance mechanisms, ownership structures or management characteristics can be subject to the problem of endogeneity. Broadly, a loop of causality between the independent and dependent variables of a model leads to endogeneity. The problem of endogeneity occurs when the independent variable is correlated with the error term in a regression model. This implies that the regression coefficient in an ordinary least squares (OLS) regression is biased.

The results presented earlier in this chapter on the OLS regressions reveal that there is a significant positive relationship between corporate risk disclosure and the ethnicity of CEO. CEO ethnicity is consistently found to be the most significant hypothesised explanatory variable in Tables 5.7, 5.8, 5.9 and 5.10. These results indicate that firms with a Bumiputera CEO will disclose higher risk information. However, intuitively,

there could be loop causality between a CEOs ethnicity and a firm's risk disclosure. It was hypothesised in H_{06A} that Bumipitera CEOs, due to ethnic-religious values they hold, would influence their firm towards higher disclosure of risk information. However, reverse causality could be argued. Thus, boards of firms wishing to change the level of risk disclosure might be prepared to change the CEO when the opportunity to make a change arises. Over time, boards wishing to reduce the level of risk disclosure might choose a non-Bumiputera CEO, whereas those wishing to increase the level of risk disclosure might choose a Bumiputera CEO. Because of this reverse causal relationship, the ethnicity of CEO will be endogeneous.

The problem of endogeneity, between ethnicity of CEO and corporate risk disclosure can be statistically tested. This problem is statistically referred to as simultaneity because it has to do with two variables simultaneously causing each other. To solve this problem, instrumental-variable estimation is used. In particular, an instrument (or a set of instruments) that is assumed to be exogeneous is selected and then two-stage simultaneous least squares (2SLS) regression is performed. In this case, the endogeneous independent variable is ethnicity of CEO (ETHN_CEO). The instrumental variable (deemed to be exogeneous to risk disclosure level) could be the firm's earnings per share (EPS). The reverse causality model between ETHN_CEO and RD that contains the instrumental variable EPS, is shown in equation 5.1. Equation 5.1 is regressed simultaneously with the 'baseline model' developed for this study and repeated in equation 5.2.

$$ETHN\_CEO_{jt} = \beta_0 + \beta_1 RD_{jt} + \beta_2 FAMCTRL_{jt} + \beta_3 GOVOWN_{jt} + \beta_4 FOROWN_{jt} + \beta_5 EPS_{jt} + \varepsilon_{jt} \quad \text{.....(5.1)}$$

$$RD_{jt} = \beta_0 + \beta_1 AGE\_CEO_{jt} + \beta_2 AGE\_CAC_{jt} + \beta_3 FUNCT\_CEO_{jt} + \beta_4 FUNCT\_CAC_{jt} + \beta_5 EDU\_CEO_{jt} + \beta_6 EDU\_CAC_{jt} + \beta_7 TEN\_CEO_{jt} + \beta_8 TEN\_CAC_{jt} + \beta_9 ETHN\_CEO_{jt} + \beta_{10} ETHN\_CAC_{jt} + \beta_{11} FAMCTRL_{jt} + \beta_{12} GOVOWN_{jt} + \beta_{13} FOROWN_{jt} + \beta_{14} LNSIZE_{jt} + \beta_{15} LEV_{jt} + \beta_{16} BIG4_{jt} + \beta_{17} DUMMY\ (INDUSTRY) + \varepsilon_{jt} \quad \text{.....(5.2)}$$

Equations 5.1 and 5.2 above were run simultaneously using the 2SLS estimator. The results are presented in Table 5.15.

Table 5.15

Simultaneous Equation Models using 2SLS Estimator

Panel A

Simultaneous equation model estimated with 2SLS (Dependent variable: Ethnicity of CEO)

	Coef.	Std. Err.	z	P>[z]	[95% Conf. Interval]	[95% Conf. Interval]
RD	0.005	0.001	5.79	0.000	0.003	0.007
FAMCTRL	-0.635	0.174	-3.64	0.000	-0.976	-0.293
GOVOWN	0.006	0.001	3.26	0.001	0.002	0.010
FOROWN	-0.002	0.002	-1.09	0.274	-0.007	0.002
EPS	-0.001	0.001	-1.00	0.319	-0.002	0.000
CONSTANT	-0.152	0.104	-1.45	0.146	-0.357	0.053

Panel B

Simultaneous equation model estimated with 2SLS (Dependent variable: Risk disclosure)

	Coef.	Std. Err.	z	P>[z]	[95% Conf. Interval]	[95% Conf. Interval]
AGE_CEO	-0.251	0.616	-0.41	0.683	-1.459	0.956
AGE_CAC	0.308	0.558	0.55	0.580	-0.785	1.403
FUNCT_CEO	9.073	13.225	0.69	0.493	-16.847	34.994
FUNCT_CAC	6.333	12.269	0.52	0.606	-17.713	30.380
EDU_CEO	-43.085	32.076	-0.134	0.179	-105.953	19.782
EDU_CAC	4.142	9.701	0.43	0.669	-14.872	23.157
TEN_CEO	-0.205	0.452	-0.45	0.650	-1.092	0.681
TEN_CAC	-0.008	0.679	-0.01	0.990	-1.341	1.323
ETHN_CEO	136.688	27.269	5.01	0.000	83.240	190.135
ETHN_CAC	1.227	7.601	0.16	0.872	-13.671	16.125
FAMCTRL	79.037	33.506	-2.36	0.018	13.364	144.709
GOVOWN	-0.716	0.363	1.97	0.049	-1.429	-0.003
FOROWN	0.378	0.393	0.96	0.336	-0.393	1.150
SIZE	1.408	3.910	0.36	0.719	-6.254	9.072
LEV	3.701	8.957	0.41	0.679	-13.854	21.258
BIG4	7.587	9.890	0.77	0.443	-11.796	26.971
TRADSERV	-3.989	42.158	-0.09	0.925	-86.617	78.639
CONSUMER	6.581	41.966	0.16	0.875	-75.671	88.834
INDUSTRIAL	-0.020	41.673	-0.00	1.000	-81.698	81.656
CONSTRUCTION	0.760	44.392	0.02	0.986	-86.247	87.768
PLANTATION	34.440	48.117	0.72	0.474	-59.868	128.748
PROPERTY	4.483	44.246	0.10	0.919	-82.237	91.205
INFRATECH	-11.533	53.125	-0.22	0.828	-115.657	92.590
CONSTANT	-6.285	93.555	-0.07	0.946	-189.650	177.080

The result of the Hausman test for both equations is Chi^2 (df = 24) = 66 (p = 0.000). This significant Chi^2 for the simultaneous equation confirms that there is endogeneity problem existing between risk disclosure and ethnicity of CEO. Therefore, the OLS results shown previously in Table 5.7 would have been biased. These results need to be replaced with the findings given in Table 5.15 above. By running the 2SLS estimator, Table 5.15, Panel B, deals with the endogeneity problem and still shows ETHN_CEO to be significantly related to RD (P>[z] = 0.000). It also confirms the reverse relationship in Table 5.15, Panel A, that RD is significantly positively related to ETHN_CEO.

5.8 DISCUSSIONS

5.8.1 Management-Specific Characteristics and Risk Disclosure

5.8.1.1 Age

This study finds an insignificant association between the managers age (AGE) and disclosure of risk information in the baseline model as well as in the alternative models. The findings of this study suggest that the age of Chief Executive Officer (CEO) and the Chair of Audit Committee (CAC) does not influence corporate risk disclosure, which is not supportive of the upper echelons theory prediction and most prior findings from developed markets (e.g. Child, 1974; MacCrimmon and Wehrung, 1986). Thus, this study concludes that the age of the CEO and the CAC does not lead to higher or lower risk disclosure.

One plausible explanation for the insignificant finding between managers age and risk disclosure is the Malaysian corporations are likely to comprise of older managers. This could be seen from the descriptive analysis (Table 5.1) which provides evidence of an average of 54 years old and 63 years old for the CEO and CAC, respectively. It is argued that older managers who have deeper understanding of firm-specific and job-specific knowledge which enables them to understand its environment and competition are reluctance to reveal risk information. This may possibly indirectly explain the insignificant findings of this study.

5.8.1.2 Functional Track

From the analyses conducted, it is found that functional track of managers (FUNCT), proxied by the 'throughput function' and 'output function', is negatively associated with risk disclosure, but this relationship is not significant in all models except for the functional track of CEO (FUNCT_CEO) and total risk disclosure in the baseline model. The results show a negative and significant coefficient between functional track of CEO (FUNCT_CEO) and total risk disclosure at the 10 percent level. This result demonstrates that to some extent, managers in the 'throughput' background develop lower risk disclosure as they handle things (e.g., risk information differently due to their training and background in accounting to be more conservative and prudent. This result is consistent with the prior study by Bamber *et al.* (2010) who reported a negative contribution from directors with accounting or finance background (i.e. a 'throughput function') in disclosing earnings forecast. They suggest that these managers develop disclosure styles that reflect lower tolerance of ambiguity.

The findings of this study support the upper echelons theory that suggests managers' functional career tracks (e.g., marketing, accounting, legal) affect their preferences (e.g., Hambrick and Mason, 1984; Jensen and Zajac, 2004). Upper echelons theorists (Hambrick and Mason, 1984, p. 200) suggest that managers' primary functional career track affect his/her choices because 'career experiences partially shape the lenses through which they view current strategic opportunities and problems'. A functional career track helps managers to practice strategies in line with their own functional expertise (e.g., Smith and White, 1987; Thomas *et al.,* 1991; Jensen and Zajac, 2004).

5.8.1.3 Education

Interestingly, this study finds a significant association between managers' education (EDU), proxied by managers holding professional accounting qualifications and/or MBA qualifications and environmental risk disclosure as well as strategic risk disclosure in the baseline model. The results show a positive and significant association between education of CAC (EDU_CAC) and environmental risk disclosure as well as strategic risk disclosure. As in the alternative models, the results provide strong support for the relationship between CAC holding professional accounting qualifications and disclosure of environmental risk and strategic risk. These results imply that CAC have

more influence in the broader risk area (i.e., environmental risk and strategic risk) rather than in the technical information area (i.e. operational risk and financial risk).

However, the results are negative and significant between education of CEO (EDU_CEO) and environmental risk disclosure. This result appears to be insignificant in the alternative models even though the coefficients are negative. This insignificant relationship between CEO education and risk disclosure supports prior findings by Ge *et al.* (2009) who found that the Chief Financial Officers (CFO) holding Certified Public Accountant (CPA) background do not appear to have a strong directional effect on accounting choices.

One plausible reason why managers' education does not improve risk disclosure in total may be due to the measurement of the variable. This study only focuses on the CEO and CAC who are holding professional accounting qualifications and MBA qualifications. Perhaps, each director comes from a different education background that could influence their cognitive value. For example, in a Nigerian study, Eze *et al.* (2011) focus on different education backgrounds of small business managers on an Information Technology (IT) adoption study. They examine different education background of managers and categorized them into six groups, namely, First School Leaving Certificate, West African Examination Council, Professional Certificates, National Diploma/Vocational programme, First Degree/Higher National Diploma and Post Graduate Degree. Their results show that managers with West African Examination Council Certificate and managers with National Diploma will negatively and significantly influence the extent of IT adoption. However, their results do not support upper echelons theory. Nonetheless, representation of formal education of top managers, to some degree, indicates a person's knowledge and skill base. Perhaps, investigation on the different education level of managers such as Doctorate, Masters Degree, Bachelor Degree, Diploma, College or others will provide an interesting avenue for future research.

5.8.1.4 Tenure

Supporting the prediction of upper echelons theory, this study finds a significant negative association between the CEO tenure in the firm and risk disclosure. The findings of this study suggest that longer-tenured CEO in the firm is associated with

lower risk disclosure, which is consistent to the upper echelons theory prediction. A longer-tenured CEO who has expertise in the organization may not want to disclose more risk information may be due to the danger of litigation is outweigh the positive effects of reporting more risk. A longer-tenured CEO is seems to be more risk averse and resist to change as they may be already comfortable in their position for a long time. This finding is to a certain degree consistent to the previous paper by Finkelstein and Hambrick (1990) in relation to the top management team tenure and organizational outcomes in which they found a positive association between team tenure and strategic perseverance as well as strategic conformity.

The finding of CEO tenure in this study also appears to support the findings as is commonly presented in the past literature regarding risk-taking propensity. Risk-taking propensity requires a willingness to embrace strategic change and uncertainty that would seem to favour shorter tenure. These advantages of short-tenured appear to exceed the advantages of long-tenured which seem to be firm-specific human and social capital, knowledge and power. Furthermore, long-tenured CEOs are likely to remain more rigid in maintaining the status quo.

5.8.1.5 Ethnicity

Strong findings were obtained in this study regarding ethnicity of CEO (ETHN_CEO). There is a positive and significant relationship between ethnicity and risk disclosure in the baseline model as well as in the upper echelons model at the 1 percent level. The positive result implies that risk disclosure is higher when CEO on the board is Bumiputera (Malay). This result supports the upper echelons theory. In this view, Malay CEO which is from the lower socio-economic group in Malaysia tends to take up more transparent strategies as compared to other ethnics by disclosing more risk disclosure. This findings support previous findings by Haniffa and Cooke (2002) who suggest that Malay directors perform their businesses based on Islamic business ethics by disclosing more compared to Chinese directors. Business ethics in Islam covers transparency and as such, the Malays may be expected to be less secretive in their risk disclosure practice. These arguments seem more reasonable because for Muslims, racial values come after Islamic values.

Haniffa and Cooke (2002, p.317) further suggest that 'the governmental focus on culture may solicit a response to secrecy from those who feel threatened'. They found less voluntary disclosure associated with boards dominated by Chinese directors. Haniffa and Cooke (2005) recent study on the relationship between culture and corporate social reporting also documents similar findings and suggests that disclosure is attributed to cultural sensitivity and is largely endorsed by government policy.

Addressing the endogeneity issue, the Hausman test gives evidence that there is a reverse effect between ethnicity of CEO and corporate risk disclosure. This finding infers that the views of a CEO on corporate transparency can be a factor affecting that CEO's appointment to, and retention in, the position. It indicates that firms whose boards prefer their firm to provide greater transparency in the form of higher risk disclosure will be more inclined to appoint, over time, a CEO with Bumiputera ethnicity. Alternatively, boards that prefer lower corporate risk disclosure will be more inclined to appoint, over time, a CEO with non-Bumiputera ethnicity.

5.8.2 Ownership Characteristics and Risk Disclosure

5.8.2.1 Family Ownership

Agency theory addresses the role of the ownership structure as a complementary mechanism to a board's effectiveness. Different from the conflict of interest between outside shareholders and managers in a diffused ownership (such as in the UK and US), the agency problem in Asia where an ownership concentration structure is more common, moves between the controlling owners and minority shareholders (Claessens and Fan, 2002). The controlling owners of the firm, who are in many cases also the managers, exercise their rights by increasing effective control and power in a firm. They also could influence and determine how the company is run depends on their private benefits that may expropriate the rights of minority shareholders.

In the case of family ownership, this study finds an insignificant association between the family ownership, proxied by the proportion of family members on the board to the total number of directors (FAMCTRL) and risk disclosure. In all models except for the ownership model, the family-owned company is found to be insignificant. In the ownership model, however, the family-owned company is found to be negatively and significantly related to total risk disclosure and operational risk disclosure at the 10

percent level and 5 percent level, respectively. These findings suggest that family-owned companies tend to reduce their contribution of the management's responsiveness to investors especially in their operational area. In line with the argument by Mohd Ghazali and Weetman (2006) and Haniffa and Cooke (2002), this may be due to the secretive policy within the company.

5.8.2.2 Government Ownership

In respect of the government ownership variable, this study finds interesting results on the relationship between the government-owned companies and risk disclosure. The coefficient of government ownership (GOVOWN) is consistently positively and significantly associated with risk disclosure as predicted. It implies that the higher the government shareholding in a company the higher the level of risk disclosure. The result suggests that the presence of a large government owner may increase managements' propensity to disclose more to reflect the government's commitment to transparency. On top of that, the greater risk disclosure by government-owned company could increase in the level of confidence among investors; reduce uncertainty in the quality of the reporting and ultimately could improve access to international capital market.

This finding is similar to a prior study by Said *et al.* (2009) who found a positive and significant relationship between government ownership and the level of corporate social responsibility disclosure. The evidence of a significant association between government ownership and disclosure in this study extends the earlier findings by Eng and Mak (2003). The study by Eng and Mak (2003) reports a positive and significant association between government ownership and voluntary disclosure. Using a Singapore sample, their study suggests that government ownership increases moral hazard and agency problems; therefore, disclosure is a means of mitigating these problems.

The role of government interventions in enhancing the extent of the level of corporate risk disclosure in Malaysian companies appear to be vital. The government ownership is an important mechanism that ensures companies will comply with accounting standards and other legal requirements (Said *et al*., 2009). Companies with the involvement of government as investors are also likely to be better governed (Caves

and Christensen, 1980; Kay and Thomson, 1986; Martin and Parker, 1995; Ramirez and Tan, 2004; Ang and Ding, 2006). Additionally, government interventions may generate pressures and monitoring power (Wang *et al.,* 2008) for companies to disclose additional risk information because the government is a body that needs to gain the trust of the public. As a result, the awareness by management of these companies is more towards the importance of maximising shareholders' value over self-interests by disclosing more risk information.

5.8.2.3 Foreign Ownership

Consistent with expectations, this study finds a positive association between foreign ownership (FOROWN) and risk disclosure. However, none of the coefficients are significant.

The findings of this study do not support previous studies such as Haniffa and Cooke (2005) which found that corporate social disclosure is associated with the presence of foreign ownership in the company. Nonetheless, the results of this study are similar to prior studies by Said *et al.* (2009). In their study, they assessed the relationship of corporate governance characteristics which comprise foreign ownership with corporate social responsibility disclosure. They did not find sufficient evidence regarding foreign ownership and argued that the involvement of foreign shareholders does not enhance the extent of corporate social disclosure in Malaysia. Results reported in the ownership model (*Model 5*) of this study also find an insignificant relationship between foreign ownership and corporate risk disclosure.

5.8.3 Value Relevance of Risk Disclosure

This study does not find any significant association between total risk disclosure (TRD), regulated risk disclosure (RRD) and non-regulated risk disclosure (NRRD) and the variation in share price (see: Tables 5.4, 5.5 and 5.6). Specifically, this study finds a positive but non-significant association between both total risk disclosure and non-regulated risk disclosure and the firm value (see: Tables 5.4 and 5.6). The findings of this study are limited by the lack of a clear measure of the quality of the disclosed risk information. Further, the evidence of lack of value relevance implies that most of the firms disclosed little information on risk especially non-regulated risk information due

to several reasons. First, less pressure from regulators will lead companies to provide less substantive decision-useful information on risk and uncertainty to investors. Second, the information disclosed is possibly unreliable, not timely, and irrelevant. Due to the lack of availability of the credibility and timeliness of risk information for the relevant time period, the impact of risk disclosure may be impounded in the share price. Third, the lack of value relevance of risk disclosure is also likely due to the fact of market efficiency problems in which large companies have considerable amount of uncertainty spinning around their prospects. Fourth, in light of emerging capital market, the market was relatively not efficient due to the inside knowledge in the hands of controlling shareholders. This inside information may be due to the increased availability of relevant information from the management and not from the annual reports which will reduce its value relevance (i.e. do not have significant impact to the companies' share prices).

The results also find that there is a negative but non-significant association between regulated risk disclosure and firm value. Even though there is no statistical evidence of the significant relationship, this result could possibly suggest that the cost of compliance with regulated risk disclosure is higher than the non-compliance costs (e.g. Hassan *et al*., 2009). This result could also possibly suggest that disclosure of new and significant risk surrounding business environment could scare investors, therefore, companies rather give a generalised risk disclosure (especially in compliance to the *financial reporting standard*) which in turn do not have value-relevance to investors and potentially reducing its value. Alternatively, in light of the new risk information, new disclosures could influence investors' assessments which result in disclosures being associated with impending decline in share price.

Additionally, the results consider the interaction terms between family-controlled firms and total risk disclosure, regulated risk disclosure and non-regulated risk disclosure, respectively. These results found that there is a positive and significant relationship between the interaction term TRD*FAMCTRL_20, RRD*FAMCTRL_20 at 10 percent levels and NRRD*FAMCTRL_20 at 5 percent level. The inference is that family-controlled firms in Malaysia that disclose higher risk information experience higher share prices compared to non-family controlled firms. As found earlier in this study, the relationship between family ownership and risk disclosure is not statistically significant

in all models except in the ownership model (*Model 5*) where the relationship of family ownership and risk disclosure appear to be negative. The findings suggest that the presence of a higher proportion of family members on boards will lead to lower risk disclosure. However, the findings on the interaction terms are perhaps the adverse effect on the role of family members. Since family-controlled firms are likely to not encourage exposing risk information, the higher risk information disclosed by this type of company will inform their shareholders that the risk information disclosed are more credible and important.

The interaction terms of government-controlled firms with total risk disclosure, regulated risk disclosure and non-regulated risk disclosure are not significantly associated with the variation in share price. As suggested earlier in this study, the pressure from the government as a major shareholder is believed to influence these companies to disclose more risk information. Therefore, it is expected that government-controlled firms will disclose more risk information than companies without government-controlled. The result may be due to the fact that there is political influence, for example, monitoring power by the government where the government are the main agent contracting with the firm.

This study also finds a negative significant association between the interaction of foreign-controlled firms with total risk disclosure (TRD*FORCTRL_20), regulated risk disclosure (RRD*FORCTRL_20) and non-regulated risk disclosure (NRRD*FORCTRL_20) to share price. These results suggest that foreign-controlled company that disclose higher risk information tend to have lower firm value compared to locally-owned companies. There might be three possible reasons on the negative market reaction for more risk disclosure by foreign-controlled companies. First, the more risk information disclosed by foreign-controlled companies could be a sign of bad news disclosure contained in the level of risk disclosure. The inference is foreign-controlled are known to disclose ‘bad news’ more readily than non-foreign controlled companies. Second, this may be due to a different perception on foreign-controlled firms in which they are likely to have incentives to skew the volume of risk disclosure mainly for image management and not the reality of risk exposure; therefore, the value of the company would be discounted. Third, foreign-controlled companies are typically a multinational group of companies, so there is possibility that the market has already

obtain risk information which may be publicly available through the multinational group reporting in other countries. Therefore, risk disclosure in the annual report within Malaysia may not provide new information, hence reducing its value.

5.9 SUMMARY AND CONCLUSION

In this chapter, the findings of the present study are presented based on various analyses conducted. Firstly, a number of additional analyses in relation to the determinants of corporate risk disclosure are conducted to test the stability and robustness of the findings. This consists of examining the relationship between upper management characteristics and corporate risk disclosure using different measurements of age and education; testing the baseline model without the ownership variables as well as without the upper management variables. Secondly, several analyses are conducted to test the value relevance of corporate risk disclosure by companies sampled (i.e. greater risk disclosure increases a firm's value).

Drawing from previous literature on upper management demographic characteristics, five manager-specific characteristics were selected and investigated namely, age, functional track, education, tenure and ethnicity. The regression analyses show that the effect of manager-specific characteristics (i.e. functional track, tenure and ethnicity) on corporate risk disclosure is statistically significant. These results are as predicted by the upper echelons theory. The results of this study suggest that firms with 'output function', shorter-tenured and Bumiputera CEO have disclosed more risk information. The endogeneity test between risk disclosure and ethnicity of CEO shows that there is a reverse causal relationship between these two variables where companies wishing to change their level of risk disclosure would be inclined, through their board, to consider changing, at an opportune time, their CEO to one with a different ethnic background. Inversely, no significant relationship was found between all manager-specific characteristic (i.e. age, functional track, education, tenure and ethnicity) and other top level manager (i.e. CAC) with corporate risk disclosure. It is important to note that the association between risk disclosure and manager-specific characteristics is still ambiguous. It could also be argued that unlike the effect of manager-specific factors on other types of corporate accounting choices and disclosure examined in prior studies, the manager-specific factors affecting the level of risk disclosures are different.

Upper echelons theory suggests that managers' demographic characteristics are the appropriate starting point for exploring reasons for differences in individual managers' preferences. Drawing on a comprehensive review of a broad set of literatures, this study posit and find partial associations between managers' demographic characteristics and their tendency to disclose risk information, although the explanatory power of the demographic characteristics is moderate.

With regards to ownership structures, this study reports significant results on the relationship between government ownership and corporate risk disclosure. The result shows a consistently positive and significant impact on corporate risk disclosure. The role of government ownership supports the incentive of active monitoring hypothesis which is seen as a mechanism for minimizing information asymmetry.

Interestingly, in the additional analysis using the baseline model without the upper management characteristics, this study finds a significant and negative relationship between family ownership and corporate risk disclosure. The findings suggest that lower corporate risk disclosure is associated with firms dominated by family relationships.

Finally, with respect to value relevance analyses, this study finds no significant results of the impact of risk disclosure on a company's value. This result does not support the 'disclosure principle' argument that companies employ risk reporting as a mechanism to inform investors and reduce information asymmetry, which leads to a higher firm value. While risk disclosure is nowadays increasingly required by regulations, therefore there is a policy question as to whether the current requirements for risk disclosure in annual reports are comprehensive and effective. Risk disclosure regulation might have prescription on what to be reported but the quality is not measured or regulated so firms merely balancing compliance cost and benefits reporting. Unless the firm thinks it's value-relevant to investors and regulated, higher disclosures would be expected from them. On the other hand, it could be that companies follow a benchmark of good practice communications and meet market's expectation, therefore any increase in disclosure has either a low effect or no effect on the firm value. Alternatively, it could be that these companies have no or low information asymmetry specifically in risk disclosure or otherwise, because it could be

that investors rely on other sources of information rather than the annual report to make their decisions.

However, the findings revealed in this chapter show that only when the analysis on the interaction between ownership control (i.e. family control and foreign control) and corporate risk disclosure has been done, then only investors perceive that the risk information is credible and relevant. These findings clearly demonstrate that the ownership control of a firm is of substantial significance in determining the value relevance of annual report disclosures by companies. The next chapter presents the conclusions from the findings, draws key implications and limitations and highlights potential suggestions for future research.

CHAPTER 6

SUMMARY AND CONCLUSION

6.1 INTRODUCTION

The core purpose of this chapter is to reflect and highlight the findings related to the research objectives and discuss the contribution and implications of the study as well as suggestions for future research. This final chapter is organised into six sections. Section 6.2 summarises the main findings of this study. Next, Section 6.3 addresses the potential implications of the study, followed by a discussion on research scope and limitations in Section 6.4. Section 6.5 offers several possible avenues for further research. Finally, Section 6.6 concludes the thesis.

6.2 SUMMARY OF METHOD AND FINDINGS

This study has investigated the nature and extent of corporate risk reporting in the Malaysian setting. In measuring disclosure levels, several previous studies have used content analysis of annual reports. Various content analysis metrics are used. This study uses frequency of sentences containing pre-determined risk-related keywords. The sentence coding scheme separates disclosure into four categories (i.e., operational risk, environmental risk, financial risk and strategic risk). The keywords relating to risk definitions are used to avoid subjective judgements and inconsistencies in computing the text of risk disclosure (Mir *et al.,* 2009; Zeghal and Ahmed, 1990). A worksheet is developed to capture what risk information has been disclosed and the volume of the risk information disclosed. This study is focusing on the whole sections of the annual reports (e.g., chairman statement, statement on corporate governance, statement on internal control and operations review, notes to the accounts), for 2009 with a total of 128 non-financial companies from the top 200 companies listed on Bursa Malaysia's Main Board based on the market capitalization.

Risk disclosures among Malaysian companies are found to primarily focus on financial risk and operational risks. The findings also indicate that these two types of risk

disclosures dominate over the other two types of risk disclosures – strategic risk and environmental risk. From the content analysis, it can be concluded that there is risk-related information disclosed by companies in their annual reports but the disclosure of risk information not comprehensive. In particular, strategic risk and environmental risk information is limited. This reveals that though additional non-regulated risk information is disclosed, it is poorly provided. Despite the fact that all categories of risk disclosures could have relevance to investors and other stakeholders, it is found that companies do not structure the risk disclosure according to any consistent or comprehensive framework, unlike financial report disclosures. In the context of risk information, the omitted disclosure could be as significant as that which is included in the text (see Jameson, 2000). Therefore, the texts that describe relatively limited or vague information in certain risk categories without allowing annual report users to glean the potential impact of those risks can obscure important decision-modelling information for stakeholders.

Regulations on disclosure should function to ensure that investors have up-to-date, relevant information, so disclosure regulations should be deliberately intend to bridge the information gaps in the market. The findings of this study indicate that financial reporting standards and Bursa Malaysia Listing Requirements (i.e., statement on corporate governance together with the statement on internal control) have influenced the extent of risk information (i.e., financial risk and operational risk) disclosed by Malaysian companies. However, the quality of the information has not been determined. Previous research has found that while regulation is efficient in increasing the level of disclosure, there is no impact on the quality of information (see O'Shea *et al*., 2008). Hence, providing information on risk needs more effort that would enhance the value relevance of risk reporting.

Moreover, this study examines the effect of top managers' demographic characteristics (i.e., age, functional track, education, tenure and ethnicity) and ownership structure (i.e., family ownership, government ownership and foreign ownership) on the extent and type of corporate risk disclosure in Malaysia. The purpose is to examine what motivates and influences companies to go beyond disclosure requirements and voluntarily provide more risk-related information that could be relevant to stakeholders.

Driven by conflicting and inconclusive views on whether the backgrounds of key individuals can determine corporate strategic decisions (e.g., Hambrick and Mason, 1984; Bertrand and Schoar, 2003; Ge *et al.*, 2009; Bamber *et al*., 2010), this study examines whether the CEO's and the CAC's age, functional track, education, tenure and ethnicity exert a significant influence on the firms' risk disclosure. The influences from these CEO and CAC demographic characteristics and their risk-taking propensity and tendency to make information disclosure are constructed from upper echelons theory. This theory has been reviewed from strategic management, economics, finance and accounting literatures. The findings in this study show inconclusive evidence of the impact of these observable CEO and CAC characteristics on corporate risk disclosure. However, focusing on total risk disclosure, the key underlying factor that affects the extent to which risk information is disclosed is CEO ethnicity. The significant relationship between CEO ethnicity and total risk disclosure level suggests that companies with Bumiputera CEOs disclose more risk information than non-Bumiputera (i.e., Malaysian Chinese, Malaysian Indians and foreigners) CEOs. The findings from the Hausman test for endogeneity between risk disclosure and ethnicity of CEO confirms that endogeneity exist. Therefore, this result could infer that companies seeking higher risk disclosure will tend to have a CEO with Bumiputera ethnicity. The findings also show that CEOs in the 'throughput function' reflect elements of conservatism (which are risk aversion and less confidence in disclosing risk information). Disclosure of risk information is also found to be negatively related to the CEO's tenure, consistent with the prediction of upper echelons theory, suggesting that a longer-tenured CEO is not willing to take risks and is less confident in disclosing risk information which is full of uncertainty. However, with regards to CAC demographic characteristics (i.e., age, functional track, education, tenure and ethnicity), the results show no significant relationship with total risk disclosures. These results suggest that the CAC's observable demographic characteristics are an insignificant factor in the CAC's decision influence regarding corporate risk reporting.

From a practical perspective, evidence on the relations between CEOs' observable demographic characteristics and corporate risk disclosure can give evidence to investors that help them evaluate the propensity of a CEO to reduce information asymmetry relating to levels of risk of their investment. Knowing that Bumiputera with an output functional background and shorter-tenured CEOs are more likely to disclose

risk information unless it is regulated, can help investors interpret when no information might not necessarily indicate bad information (contrary to signalling theory that non-disclosure signals bad new) (e.g., Verrecchia, 2001).

Though this study does not document any significant relationship between family ownership and corporate risk disclosure using the baseline model, segregating the baseline model into an upper echelons model and an ownership model reveals some significant results. Focusing on the ownership model, there is a negative and significant impact of boards dominated by family directors on corporate risk disclosure. The negative and significant result between family ownership and corporate risk disclosure in this study supports the agency argument that these family-controlled firms are more likely to encounter higher agency costs because the family members who are also the directors are more focus on inside information and less likely to engage in reporting more risk information to outside investors.

This study also produces findings which are important in relation to the role of government ownership and its influence over the extent of corporate risk disclosure. Similar to the findings of previous studies (e.g., Arshad *et al.,* 2012), the central finding of this study is that there is a positive contribution from government as a major shareholder to determine the extent of corporate risk reporting in Malaysia. As large shareholders, government can play a positive role to act as a monitoring mechanism towards the company and provide better market access to risk information (i.e., lower agency costs and reduce information asymmetry). It appears that large government shareholders generate an incentive for directors to carry out diligent monitoring. This is due to the fact that government has the resources, expertise and motivation to certify its strong management controls and to actively monitor the actions of management. This is likely to improve the extent of corporate risk disclosure as supported by the active monitoring hypothesis. With regard to the ownership held by foreigners, this study documents no support for the relationship between foreign ownership and corporate risk disclosure. The evidence in this study suggests that the impact of foreign ownership on corporate risk disclosure is not strong.

In addition, this study examines the benefits of enhancing risk information by empirically testing the impact of risk disclosure level on a firm's value. Conventional

arguments suggest that greater disclosure increases stock price of the company. However, empirical evidence produces mixed results. This study has used regression analysis to assess the impact of risk disclosure level on the company's share price to explain the effect of different types of risk disclosure on firms' value. The relationship between the total risk disclosure level and the firms' value as measured by the company's share price shows no significance. Regulated risk disclosure and non-regulated risk disclosure also have no impact on the firm's value. This result differs from the predictions of the most of disclosure theory (i.e., signalling theory). Perhaps, a reason is the measurement of risk disclosures in this study lacks a clear measure of the quality of the disclosed risk information. Nonetheless, this study provides evidence of lack of value relevance which implies that firms disclosed insufficient information on risk to the share market. The inference is that greater pressure from regulators and the market is needed for companies to provide substantive decision-useful information on risk and uncertainty.

Interestingly, this study finds a significantly positive relationship between share price and the interaction term of corporate risk disclosure and family-controlled firms. This implies that firms with a higher proportion of family members on the board that disclose higher risk information are treated as having more value-relevance by investors. Family-controlled firms are expected to have the advantage of inside information about risk levels, and would lose that information advantage if the company make greater public disclosure about risks. Therefore, higher risk information disclosed by a family-controlled company will signal to more important information about risks and uncertainties.

By comparison, the interaction terms of government-controlled firms with corporate risk disclosure is not significantly associated with share price. This implies that firms with greater risk disclosure do not influence the company's share price on the grounds that they are government controller. This study also finds a negative significant association with share price of the interaction of foreign-controlled firms and corporate risk disclosure. The inference is that foreign-controlled company that disclose higher risk information are viewed by investors as being more willing to provide 'bad news' information. The conveying of 'bad news' about corporate risk by foreign-controlled companies would lower the market to revise their share value downwards.

6.3 IMPLICATIONS OF THE STUDY

Implications of a deficiency in the comprehensiveness of corporate risk disclosure

The results reveal a much lower level of disclosure in the categories of environmental and strategic risk. This narrows the comprehensiveness of corporate risk disclosure mainly to operating and financial risk categories, where regulation predominantly applies. The fact that environmental and strategic risks are the types of risk that are usually outside the control of management would make them particularly relevant to investors. Management's perspectives on such outside environmental and strategic risk contingencies, as gleaned from disclosures in annual reports, would be important to investors in their assessment of the value of the firm. Hence, the implication of the finding of a relatively deficient extent of disclosure of environmental and strategic risk information is that companies that meaningfully increase their voluntary disclosure in this area are likely to be viewed more favourably in the share market. Alternatively, the finding enables securities markets regulators in Malaysia to identify the need for companies to have more comprehensive risk disclosure. This could lead regulators into investigating the case for developing and introducing prescriptive regulations regarding minimum disclosures to be made by listed companies about aspects of environmental and strategic risks impacting on the company.

Implications of management characteristics for corporate risk disclosure

Those management characteristics found to affect the extent of corporate risk disclosure are the CEO having a Bumiputera ethnic background, a shorter tenure and an output functional track. The implication is that company boards concerned with creating responsiveness in management to providing more transparency on corporate risk should consider the importance of recruiting top managers with these ethnic and functional backgrounds and directing them in the early stage of their appointment. A further finding is that the CAC's background, including age, functional track, education, tenure or ethnicity, does not have a significant effect on the extent of corporate risk disclosure. This finding about the CAC has an implication for corporate governance policy-makers who set certain requirements/recommendations about the Chair and members of a company's Audit Committee. It suggests that corporate governance regulation requiring the CAC to have a specific education, functional track or other background

characteristics is unlikely to be a means of achieving improved corporate risk disclosure.

Implications of ownership structure for corporate risk disclosure

The results further reveal that corporate risk disclosure is significantly inversely related to the proportion of family ownership, whereas it is significantly positively related to the proportion of government ownership. Since controlling shareholders would have more direct access to corporate risk information, especially through their representatives on the board, these findings have implications for the minority or non-controlling shareholders. They suggest that minority shareholders (as well as the public) are currently given access to higher amounts of risk-related information if they hold shares in government-controlled companies, but to lower amounts of risk-related information if they hold shares in family-controlled companies. So, to provide better protection to minority shareholders, there should be greater scrutiny and pressure exerted by Bursa Malaysia, the accounting bodies (e.g., MIA and ACCA) and the minority shareholders' association, on the risk-related disclosure practices of family-controlled listed companies.

Implications for making corporate risk disclosure value-relevant

The general finding from modelling the value relevance of corporate risk disclosure is that such information in annual reports is not currently viewed in the Malaysian share market as making a significant difference to the valuation of shares. This non-value-relevant result is found in respect of regulated and non-regulated risk disclosures, respectively. The implication is that the cost of currently providing the aggregate amount of risk disclosure in annual reports does not outweigh the perceived benefits to shareholders. One exception is foreign controlled companies, where the greater risk disclosure is found to significantly negatively affect share price. This indicates value-relevance, so the costs of higher risk disclosures in Malaysia would not outweigh the perceived benefit to shareholders of foreign-controlled companies in Malaysia. Otherwise, the implication is that both regulated and non-regulated corporate risk disclosure needs to be considerably improved in terms of its relevance as information that can be factored into models and judgements by market analysts and investors about a company's current value or its risk profile in their portfolio investment decision-making. Corporate regulators, accounting bodies and corporate management need to

systematically reassess the relevance to users of risk-related disclosures. Otherwise it will remain a relatively costly compliance exercise that does not reduce information asymmetry sufficiently for shareholders to benefit.

6.4 SCOPE AND LIMITATION OF RESEARCH

When considering the conclusions of this study, several limitations need to be taken into account. These limitations relate to the study's scope, theory application, model specification, variable measurement and result interpretation.

First, in terms of scope, the Malaysian business context is relatively unique. Malaysia is of interest in this study not only because it is a developing country but because it is considerably ethnically diverse. Malaysia is a multiethnic society with Chinese and Malays dominating its economics and politics. The domination of Malays in politics and Chinese in commerce, business and economics in Malaysia, provides a unique research setting that is not found elsewhere (Abdullah, 2006). Furthermore, these differential ethnic groups maintain and practice their own cultural values and religious beliefs (Salleh *et al.,* 2006). While other Asian countries such as Indonesia and Thailand have similar institutional environments and a strong ethnic minority Chinese presence in business, Malaysia is sufficiently different in its socio-cultural-political-economic-business context to limit this study's findings from being generalized to other countries.

Second, the year of the study limits its scope to a point in time that is representative of a down-turn in the economic cycle. Data is chosen from the year 2009 only. This year is not representative of periods prior to corporate governance reforms or during buoyant financial markets. This year is chosen because it is during the volatile share market period of the global financial crisis (2007–2009). This provides an opportunity to assess the extent of risk disclosures in a market has heightened sensitivity to issues of corporate risk information. However, in such a market, the making of decisions on corporate risk disclosure by controlling shareholders and top management may change. Hence, the findings in this study about the effects of CEO and CAC characteristics and shareholder concentrations on risk disclosure levels may not be transferable to periods of lower share market volatility.

Third, only the largest 200 listed companies, and hence those with resources that usually make them more financially resilient, are included in this study. As evidenced in this study and prior studies, corporate risk disclosure is positively and significantly related to company size. Therefore, the sample of large companies in this study may be biased towards companies whose top management and controlling shareholders face greater requirements for, or are more willing to support, higher corporate risk disclose. At the same time, however, investors in these larger (more financially resilient) companies may view marginal increases in the level of disclosure of risk-related information as having more rapidly diminishing value relevance than the marginal increases in risk-related disclosures by smaller listed companies. The findings therefore, are limited in their generalizability to medium and smaller listed companies.

Fourth, this study is limited by the ability of an agency theory perspective to be applied in the context of Malaysia's capital market. Its generation of hypotheses and interpretation of results has been focused on traditional principal-agent behavioural assumptions and information asymmetry arguments. These assumptions and arguments originated in Western capital markets where there are relatively diverse shareholdings which provide a clear separation of ownership from control. Mechanisms to reduce information asymmetry, particularly ways to get management to provide more corporate disclosures (whether mandatory and voluntary) are found to be central to the efficient functioning of Western capital markets in terms of impounding credible publicly available information into share prices in a relatively rapid and unbiased way. However, in Malaysia and other Asian countries, many firms exhibit a concentrated ownership structure. The assumption of a clear separation of ownership from control does not often hold. In firms with concentrated ownership structures in the hands of family or government owners, pressures or incentives on management to publicly disclose corporate information can be muted. Instead, from the principal-agent perspective, the traditional information asymmetry problem due to separation of ownership and control tends to arise in respect of minority shareholders (Chu and Cheah, 2006). This study has not directly addressed the research question about the influence, if any, of minority shareholders in Malaysia on the level of regulated or non-regulated corporate risk disclosure.

Fifth, alternative theories used in prior corporate disclosure literature, especially legitimacy and stakeholder theories, have not been invoked in this study. There is a large body of literature on voluntary corporate disclosure that has applied a legitimacy theory perspective (e.g., Dowling and Pfeffer, 1975; Mathews, 1993) or a stakeholder theory perspective (e.g., Ullman, 1985; Roberts, 1992) to the study of factors determining management's decisions to voluntarily disclose information such as corporate intellectual capital and corporate social and environmental performance. Since these theories underpin voluntary disclosure decision-making, they do not have currency in explaining regulated corporate risk disclosure in this study. However, the findings concerning non-regulated disclosure, mainly in the categories of environmental risk and strategic risk disclosure are limited by the absence of potential legitimacy or stakeholder variables in the model specification in this study. Such variables could include management's perceptions of the presence of a 'legitimacy gap' due to say, media reporting of allegedly financially dangerous strategies of the company, or management's perceptions of the potential power of stakeholders such as supplier-creditors. However, such variables would require an extension to the sampling and data collection in this study. It would require the collection of primary data on management's perceptions, which is a proposed direction for future research.

Sixth, the measurement and classification chosen in this study for the dependent variable, corporate risk disclosure, has limitations. Only the quantity, not the quality, of disclosure has been measured. The quantity measure is based on a sentence count in which all sentences in the annual report containing one or more of a set of pre-determined keywords, are added in an unweighted way. Other metrics and sources of publicly available data for the measurement of the quantity of corporate risk disclosure could have been chosen. Moreover, the classification of risk disclosures in this study has developed a four category typology which differs from, but draws on, several prior risk disclosure classification alternatives (e.g., Beretta and Bozzolan, 2004; Cabedo and Tirado, 2004; Linsley and Shrivers, 2006; Deumes, 2008). The choice of the classification scheme remains reasonably arbitrary. Future research could seek to refine the methods of scoring both the quantity and quality of corporate risk disclosure. It could also seek a stronger theoretical base from which to substantiate the establishment of a corporate risk classification typology.

Seventh, the distributional properties of the risk disclosure and the error term in Equation 3.1 (p.134) is lack of srict exogeneity of the independent variables.

Finally, the sample is heavily biased in favour of Trading/services, Industrial product and Consumer product sectors. Therefore, the interpretation of high level of disclosure should a limitation in this study since these three sectors might have more foreign currency exchange risk total disclosure as compared to others sectors.

6.5 SUGGESTIONS FOR FUTURE RESEARCH

Extensions to the present study are possible in the following areas:

1. As the present study used a content analysis method to examine the risk disclosure by companies (i.e. in the categorisation of risk information), future studies may test the risk disclosure using an alternative approach (i.e. meta-analysis approach). This alternative approach will allow researchers to re-analyse data used in previous studies. Additionally, this alternative method could establish whether inconsistencies in finding are due to the research method (including categorization of risk information) or to the context of the study (e.g., country-specific, regulatory intervention).

2. The present study finds the highest risk disclosure is financial risk which emphasizes the attention given by regulators to one category of users, investors. Prior risk disclosure studies have also mainly focus on information needs for shareholders or other players in securities market. However, broader corporate governance regulation includes other corporate stakeholders. Perhaps future research could look at the relevance or usefulness of other risk disclosures (i.e. operational risk, environmental risk and strategic risk) to employees, corporate suppliers and customers as well as the public at large.

3. This research relies mainly on the quantitative based research approach in relation to determining the upper management characteristics. Perhaps future research might follow up this study using more in-depth information perspective such as interview, questionnaire, survey and case study to probe into issues

not clearly explainable in this thesis. Firstly, by using interview and questionnaire approach, this can help to confirm upper echelons theory arguments that the demographic characteristics are indicator of cognitive style and values of top level managers. The purpose is to have more a direct approach to providing evidence about the cognition and values of management concerning decisions of risk disclosure preferences especially voluntary risk disclosure. Secondly, by using a survey approach, this can help in setting a set of hypothetical scenario which relates to risk disclosures applicable to risk disclosure decisions. Thirdly, by using a case study approach this could help a researcher to understand and give more dynamic picture of corporate risk disclosure practices. A case study approach can also provide the opportunity for investigation into the specific elements of upper management characteristics in greater depth.

4. Finally, future studies could investigate management's motivation or incentive for risk disclosures, and lack of disclosures, that are actually made. While the findings of the current study indicate that the annual report risk disclosure level does not have an impact on the firm's market value (i.e. value relevance), it is difficult to judge whether annual report risk disclosure is of no use to investors. With respect to value relevance studies, further investigation is needed to assess the relevance and reliability of risk information. Future research could, perhaps, study corporate risk disclosure on share market in countries where economic and political risks are higher because corporate risk disclosure have more relevance in that type of country setting. Moreover, future research could also delve into corporate risk disclosure (i.e. operational risk and strategic risk) in industries where there exists higher operational hazards (e.g., nuclear and energy consumptions) because corporate risk disclosure may be more relevance in the industries with rapidly changing technologies.

6.6 SUMMARY

This study is pursued as an attempt to investigate the influence of the CEOs and CACs of the firm, ownership structures and firm value on corporate risk disclosures for Malaysian public listed companies. Generally, this study suggests that upper managers'

demographic characteristics and ownership structures, to some extent, do matter in influencing the extent of corporate risk disclosure in Malaysia. However, not all elements of measured demographic characteristics and ownership structures are important as the study finds no evidence that upper managers' demographic characteristics (i.e., age and education) and ownership structures (i.e., foreign ownership) is valued to influence the managers' discretion. Nevertheless, the study provides strong support for the Bumiputera CEO and government ownership in enhancing the extent of corporate risk reporting disclosure in Malaysia. Perhaps, this study is the first to report a significant association between the ethnicity variable and corporate risk disclosure using upper echelons theory as prior studies mostly focused on legitimacy theory and political cost theory.

This study makes a contribution to extant literature on risk disclosure. First, the literature on approaches to designing a classification typology for corporate risk is unsettled. This study develops a typology and associated definitions that can minimize the ambiguity and maximize the objectivity of measuring the nature and extent of corporate risk disclosure. Second, in terms of key management players and the controlling shareholders, prior literature has not provide evidence on the influence of the CEO or CAC on risk disclosure, and the prior evidence on shareholder influence has been limited and mixed. This study provides new evidence on manager-specific effects in respect of the CEO and CAC. It also provides additional evidence on the effects of family, government and foreign shareholders on risk disclosure. Third, this study provides evidence that there is no value relevance for total risk disclosure as well as each category of risk disclosure to the Malaysian share market. Therefore, the results suggest that risk disclosures in companies' annual reports is driven more by regulations than by the market, which has implications for securities regulators.

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APPENDIX A

Decision rules for coding

- Sentences are to be coded as risk disclosures if they inform the reader about any opportunity, prospect, danger, harm, hazard, exposure, threat, loss, uncertainty, exposure or outlook.
- Disclosures must be specifically stated. Risk disclosures have to be mentioned explicitly; they cannot be implied.
- Quantitative risk-related items in the financial statements will not be examined. The notes to the financial statements on the other hand, will be accounted for.
- A sentence can be only accounted for more than once, if the sentence has more than one possible classification.
- The same risk disclosure sentence shall be recorded as a risk disclosure each time the keywords is appeared. This implies that the same risk disclosure sentence can be coded more than once, because each time the keyword is appeared/mentioned it draws the attention of the reader.